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VOL. XVIII NO. 9

In This Issue . . .

Collective Bargaining vs. Gov't Control . . .

Must Foremen Unionize? . . .

The Factory of The Future . . .

Are Personnel Policies Realistic? . . .

see Table of Contents page 3

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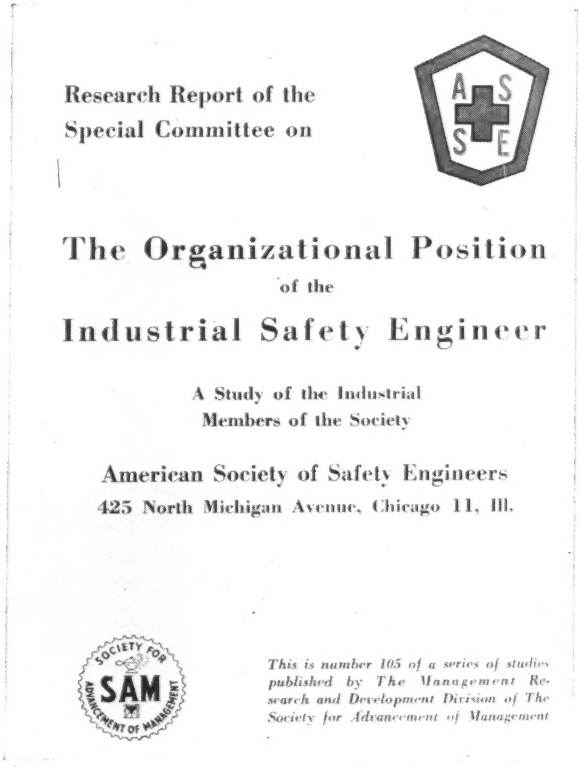
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CONTENTS

Developing the Second Team 4
by Bruce Payne, President SAM

Management-Union Future 5
by Meyer M. Semel

Must Foremen Unionize? 8
Anonymous

The Factory of the Future 11
by Harry Lee Waddell

The Interchange of Management Know-How 16
by Harold F. Smiddy

Variable vs. Fixed Retirement Ages 21
by B. Lewis Clarke, Jr.

Are Today's Personnel Policies Realistic? 24
by Aaron J. Spector

AM Advertising Review 25

Evaluating Human Relations Training 26
by W. Osterberg and T. Lindbom

The Management Bookshelf 29

CIPM Reports 31

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Developing the Second Team

JUNIOR executives are a company's best insurance.

The best way to assure continuance of a company's top effectiveness is to develop junior executives who will eventually be able to assume top management responsibility.

Such executives should be chosen fully as much for their potential as for the job for which they are hired. To gain the full benefit of this potential, a company must have a planned program for the development of its junior executives. The program should include formal training courses, learning by teaching others, and learning by participating.

Two other formalized approaches which have been successful are Multiple Management and the Junior Board of Directors. Each of these have been discussed in full in ADVANCED MANAGEMENT—SAM Conferences. In essence, the juniors learn by participating in top policy decisions, on a limited basis, and also learn by training the men who will replace them as Board Members.

One of the most effective means of interesting juniors in their job is to give them the prestige of teaching worker and foreman training courses. In this way they not only learn company policy by teaching, but are enabled to become better acquainted with the workers and the supervisors and so grow to have a much better understanding of individual problems.

Learning by participating is probably the most important point in developing and keeping junior executives. By giving them a chance to move around and by letting them learn the workings of other departments, they will not only have a broader view of the company but also a better chance to find their proper niche.

Learning by participating should mean full participation. In many companies the junior will prepare a segment of the work to be discussed but will never have a chance to learn by hearing the arguments pro and con. Here is an example in which a junior was given responsibility for a problem throughout its ultimate solution:

The vice president of production handed a particularly tough problem to an assistant works manager; he was given the sole responsibility for planning a new plant. He not only made the plan, but was given the responsibility for presenting it to the Executive Committee. Since he participated in the discussions of the Executive Committee he knew the reasons for their decisions and actions and therefore was more willing and able to put them into effect.

How much better this method is than one in which the junior executive does the spade work, but is never permitted to justify his decisions or to find out the reasons behind top management actions.

Bruce Payne, President, SAM

Management-Union Future: Collective Bargaining and Voluntary Arbitration or Government Control

by Meyer M. Semel

When voluntary arbitration does not work, what then? Shall government take over business, beginning with utilities, moving into control of every service or product that has become a so-called necessity to the American people? This thorny question is discussed here by a lawyer who gives us the action of the courts of New Jersey when collective bargaining and voluntary arbitration failed to solve the management-union problem there, pointing out how the Jersey courts' decisions may have tremendous effect on the future of every management man in the country.

SINCE the advent of the present administration there appears the belief, particularly in management circles, that the government will not involve itself in labor matters.

There is no basis for any assumption as to the administration's attitude. It is too soon to judge and the administration has not been called upon to act or to declare its policy.

Thus far there has been no change in labor conditions, and from all indications this condition will continue. Nevertheless, leaders in management and labor are uncertain of the future.

Obviously the all-time solution for all labor differences has not as yet been evolved. In a relationship so dynamic and constantly changing, no set of laws, principles, or rules can have the quality of permanency. New ways and means must be conceived to meet the exigencies of each new development. It is in the search for them that consideration must be given not only to such problems as arise, but also to the mechanics of solution presently available and necessary in the future.

Of collective bargaining much has already been said and written. Its purpose is to enable labor and management to work out agreements through duly accredited representatives instead of individually, the written master-plan contract reflecting uniformity of pay-rates and conditions throughout the industry, as well as a more congenial relationship between employer and employe. But the aims of collective bargaining do not end there.

There is eminent authority that collective bargaining also 'seeks to assist in manpower allocation and compensation without the arbitrary control of government, either in the assignment of jobs or the determination of rates of pay.'[1]

Credit is due to the representatives of labor and management for thus far keeping arbitrary governmental control in the background. The democratic processes of collective bargaining can endure so long as it remains there.

But is collective bargaining enough to serve that purpose? There are those who fear that it is not.

While it is true that give and take is the underlying principle, there are nevertheless some reservations, which if exercised, can bring to naught all the maneuverings of collective bargaining and result in stoppage of work, crippling of the industry, danger to the common welfare, ending with the intervention of the law, with compulsory arbitration under government supervision as the cure-all.

The rank and file in labor and management are firm in their determination that government authority shall not fasten its tentacles upon production and manpower. These problems must be ironed out by and between them.

[1]Dr. Dale Yoder: Personnel Management and Industrial Relations. Prentice-Hall 1948.

How Voluntary Arbitration Actually Works

Simply stated, 'Arbitration is predicated on the voluntary agreement of the parties to submit a dispute to a disinterested third party for final determination—and to abide by the decision of the arbitrator.'

'The parties in dispute, in referring to arbitration, have indicated their desire not to resort to litigation or economic conflict.'

A complete procedure has been de-

veloped tending 'to bring about a just and harmonious disposition of the controversy.'[2]

Three alternative clauses have been propounded for inclusion in collective bargaining agreements of which the 'General Labor Clause' is illustrative:

'Any dispute claim or grievance arising out of or relating to this agreement shall be submitted to arbitration under the Voluntary Labor Arbitration Rules then obtaining of the American Arbitration Association. The parties agree to abide by the award, subject to such regulations as any Federal Agency may impose. The parties further agree that there shall be no suspension of work when such dispute arises and while it is in process of adjustment or arbitration.'[2]

(Reference by way of illustration is made to the American Arbitration Association as a leading institution which for 25 years has been devoted to the formulation of rules and procedure for settling labor disputes by voluntary arbitration.)

For more than 60 years state legislatures have recognized the merits of voluntary arbitration and have been passing laws to encourage the practice. The courts, too, have lent support by adopting the broad general principle that 'arbitration proceedings are favored by the courts, and all fair presumptions will be made to sustain an award.' And where an injunction was sought against an allegedly unlawful strike and both parties requested arbitration or mediation, the court stepped aside in favor of arbitration although the contract did not provide for the same.

Both Management and Labor Have Been Indifferent

Space will not allow for a detailed discussion of the history of voluntary arbitration throughout the several states of the Union. Its development in the State of New Jersey may well serve as a model for the rest of the country.

For 54 years labor and management were left to their own devices in the disposition of their controversies. But strikes and litigation were on the increase. In 1941 the State Legislature again decided to step in. In passing the Labor Mediation Act it served notice on labor and management that the people were getting fed up with the hardships brought on by conditions resulting from their bickerings.

In this Act it was stated for the first time that such conditions called for the establishment of a public policy with respect to labor-management affairs. The establishment of a public policy lays the groundwork for governmental intervention.

In other words, the parties are no longer free to deal with the situation as they wish. If they cannot iron out their differences, they may voluntarily apply to the State Board of Mediation. For failure to do so, the Board upon its own motion may, in an existing, imminent, or threatened labor dispute, take such steps as it may deem expedient to effect a voluntary, amicable, and expeditious adjustment.

As yet, we have no way of knowing what would happen if either or both sides refused to abide by a settlement effected by the Board. But it would not be too much to assume that if the situation called for it, the Board could, of its own volition, through the Attorney-General or another qualified official, obtain a mandatory injunction compelling acceptance of the award with the usual injunctions enforcing its provisions.

Government Has Power To Take Over

That the Legislature has not only declared its intention to intervene, but to take charge, is manifested in the declared public policy as expressed in the law:

"It is hereby declared as the public policy of this State that the best interests of the people of the State are served by the prevention or prompt settlement of labor disputes;

"That strikes and lockouts and other forms of industrial disputes, regardless where the merits of the controversy lie, are forces of economic waste;

"That the interests of the consumers and the people of the State, while not direct parties thereto, should always be considered, respected, and protected:

"And that the voluntary mediation of such disputes under the guidance and supervision of a governmental agency will tend to promote industrial peace and the health, welfare, comfort and safety of the people of the State.

"To carry out such policy, the necessity for the enactment of the provisions of this Act is hereby declared as a matter of legislative determination."

There are many who no doubt will discredit the idea that government has the power to, or would, take over if circumstances called for it. Let the record speak for itself.

The Labor Mediation Act did not come up to the Legislature's expectations. Strikes continued, industry remained obdurate; food stuffs, other necessities became increasingly hard to get. Still the Legislature left labor and management to their own decisions, to the extent that its Mediation Board did not interfere although it was empowered to do so of its own motion. Presumably it was content to leave private enterprise to stew in its own juices.

Then the difficulties spread to the utilities: gas and electric, trolley and bus transportation, telegraph and telephone.

In 1946 the Legislature expanded the public policy.

"Heat, light, power, sanitation, transportation, communication and water are life essentials of the people;

"The possibility of labor strife in utilities operating under governmental franchise is a threat to the welfare and health of the people;

"Utilities operating under such franchise are clothed with a public interest, and the State's regulation of the labor relations affecting such public utilities is necessary in the public interest."

Thus died the late Commodore Vanderbilt's famous epigram: 'Let the public be damned' (ironically enough at the hand of another Vanderbilt, the distinguished Chief Justice of the New Jersey Supreme Court).

This Act makes arbitration before the Mediation Board compulsory, and for failure to abide by its recommendations, the Governor is empowered to seize a utility and run it until the dispute is ironed out.

The theory upon which seizure is predicated is such an innovation in the powers of government, that some of the old-time United States Supreme Court Justices must be turning in their graves at the 'unconstitutional and unwarranted usurpation of power by the State over private property rights' as they would have expressed it. The manner in which the present New Jersey Supreme Court dealt with constitutional and technical objections of this nature will be pointed out later.

States' Seizure Power Held Valid

It is no stretch of the imagination to assert that the State's power to seize and to operate is tantamount to the power of eminent domain. The law sets no time limit of return, even after a satisfactory peace has been concluded. The utility has no voice in determining

[2]Code of Ethics and Procedural Standards: AM. ARB. Ass'n and Am. Acad. of Arb. 1951.

when the emergency has ceased to exist. These seizure powers call for more than casual observation on the part of management:

"It is further declared to be the policy of this State that after the taking of possession of any public utility by the State—such public utility shall become for purposes of production and operation a State facility and the use and operation thereof by the State in the public interest shall be considered a governmental function of the State of New Jersey."

After the Governor has taken possession he has become the employer, and during the employment it is unlawful to strike.

On April 7th, 1947 the unions struck against the telephone Company. On the same day the Governor, acting under the new law, issued an executive order authorizing the Commissioner of Labor to seize and take possession of the property and facilities of the company and invested him with broad powers to manage and carry on the operations.

In the same month the Legislature amended the law to plug up any leaks, should the Governor's authority be challenged in the courts. Asked to arbitrate, the unions refused; initiated instead a proceeding in the Federal Court to test the constitutionality of the law. Not to be thwarted by Federal Court intervention, the Attorney-General for the State of New Jersey instituted a proceeding in the State Court asking that Court to render a 'declaratory judgment' that the law was valid. It did.

The phone company joined in the appeal to the Supreme Court of New Jersey. Three prime factors were raised and disposed of: all adversely to labor and management. In a classic opinion the Chief Justice swept aside the cobwebbed technicalities, not only justifying the Governor's seizure under the circumstances, but bringing into sharp relief the new concept: that the welfare of the people takes precedence over the so-called constitutional guaranties, which are applicable only in cases where the public welfare is not injuriously affected.

Down went the unions' cry of compulsory involuntary servitude, contrary to the 3th Amendment to the United States' Constitution. With it went the phone company's outburst against unconstitutional seizure of private property, contrary to the 14th Amendment.

When the unions and the company joined in the final assault, (that neither the State Legislature nor the State Courts had the power to act, because that power was lodged in the Federal government exclusively) the Court gently but firmly reminded the barrage of eminent counsel that the United States Supreme Court, the protector of the Federal Government's powers, had already ruled to the contrary, and pointed out that court's decisions to substantiate it.

Such is the law in New Jersey today, and such is it likely to become throughout the Union, should conditions make it necessary.

No Easy Solution Is Possible

Technicality-minded lawyers, perched high up in their ivory towers away from reality, may continue to preach the doctrine of outmoded constitutional guaranties. But leaders in labor-management thought are beginning to realize that neither legislatures, courts nor lawyers have at hand a quick and easy remedy with which to set at rest problems which have been brewing for months or years and have finally broken out with the consequent disruption. Management and labor must learn to put their house in order and to keep it so. They must learn to think in terms of public welfare and not in terms of strict legal rights. They must come to realize fully that the privilege of serving the American consumer carries with it the obligation to serve him adequately and in keeping with his needs. There must be no disunity and disagreement in the production and distribution of those commodities which so soon take on the status of necessities, as has the telephone and other modern facilities, which a few years ago were considered luxuries.

The new philosophy is thus expounded by the Chief Justice:

"The legislative enactments here in question concern the rights of substantially every member of the public to a means of communication upon which he has long been accustomed to rely, not to mention various modes of transportation and light, heat and power, which in the industrial, densely-populated areas, as well as in the rural sectors, directly and immediately affect the well-being and life of the individual and the whole of the community. And while it is true that the decision of the State court was reversed for a legislative error in the formulation of the Act, the philosophy pronounced by the Supreme Court remains intact."

Let us not delude ourselves into believing that the legislatures and courts will confine their powers to public utilities. Labor and management cannot afford to indulge in the fancy that they can disrupt the steady stream of needed commodities by their unwillingness or inability to keep that stream flowing steadily.

Under the police power the Federal and State governments can declare that any commodity or service sold on the open market may be affected with a public interest. Life insurance, food stuffs, drugs, fuel, numerous other items and services are already within the orbit.

As fast as industrial-production engineering brings forth new articles of commerce and new services, so fast do they become merged into our American way of life, and become added necessities. As soon as they become necessities, they acquire the potentiality of being affected with a public interest, subject to government supervision.

Are labor and management exploring all the available sources inclusive of collective bargaining and voluntary arbitration? Can they afford the restrictions imposed by governmental control?

Neither the legislative bodies nor the courts desire to intervene.

The democratic concepts of our government call for a harmonious social system unfettered as much as possible by laws regulating our daily lives. Is it too much to ask the dual forces of labor and management to conform? Is it logical to run rampant until government finds itself compelled to put on the check-rein?

There must be ways and means—challenging to the resourcefulness of all industry, to be sure—of enabling labor and management to settle their ever-recurring problems as the law would desire it: *inter-sese:* among themselves.

As the alternative to governmental control, it would certainly appear to be worth the effort. END

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IT IS NO SINGLE ELEMENT, but rather this whole combination, that constitutes scientific management . . . Science, not rule of thumb. Harmony, not discord. Cooperation, not individualism. Maximum output, in place of restricted output. The development of each man to his greatest efficiency and prosperity.....*Frederick W. Taylor*

Management Must Decide: Will Its Foremen Join The Team or Must They Unionize?

Anonymous

Many management experts have studied the foreman in today's shifting industrial setup. Most agree this position is a vital connecting-link between management and the unionized employee, yet management often neglects the foreman's particular place in the picture. Here a foreman tells how a foreman feels about his position, how he wants to feel, and explains by what action management could make allies of the important foreman group. This is the third in a series of articles, the first and second of which appeared in the March and June 1953 issues of AM.

Too many foremen feel they do not belong, and are more concerned over his being neither fish nor fowl than he is over actually attaining either status, i.e. either a truly functional member on the management team; or a member of a formal organized pressure group called a foremen's union. Either one will gratify his "ego satisfaction." Either one will gain him the recognition for which he, like any human being, feels he must attain.

There is another psychological force which, in my opinion, is very slowly but surely influencing foremen's union-mindedness. It can be termed the "social acceptance of unions." Practically every leader of industry realizes that unions are here to stay. A state university recently reported that "in a recent survey conducted by a midwest university, researchers found that Americans rank labor unions second in influence on national affairs, just after the federal government itself."

Now consider the foreman's "mill" thinking. It is a simple problem in logic to understand that the faults we see in top management are magnified to greater and greater proportions as one travels down the management ladder. First, obviously, is the numerical growth. In the second place, as one travels down one encounters less and less of the required training, background, and mature experience needed to make a well-rounded supervisor. To sum it up, there is no need of pointing out the sore lack of human relations at the foreman level. Foremen accept the fact that, of all management men, they are the most deficient in management arts and graces.

Where is the foreman falling down? What is the foreman neglecting to do that prevents his becoming a functional member of management? What is he neglecting which, if persisted in, may well lead to the loss of individuality and prestige? On this particular subject I have yet to hear any foreman who will not admit that the foreman himself is the most to blame. Here are some of the views of the other groups.

Top Management: "The average foreman becomes so involved, so absorbed in the ratrace of production that he can't hold up against the pressure and therefore doesn't take time to think —and that's bad."

Middle Management: "The average foreman accepts the plaudits of top management such as 'right arm of management', 'makers of policy', etc. but he seldom if ever questions himself as to whether or not he is earning or even deserving of these commendations."

Bottom Management: "The average foreman walks around as if he has a big mirror in front of him. He sees only himself."

"At 'contract lessons', (company sponsored seminars to discuss the union contract) he's always harping that its the attitude of the men that causes all this union trouble. If he only knew that to all of us who know him, he is a living example of a person who couldn't have a worse attitude."

Union Men: "The average foreman is wishy-washy. He continually piles more and more on us fellows who want to go along, and he doesn't bother the ones who goof off. He's so damn afraid of having trouble in his department."

"I asked my foreman about my 'job description' and he said to go see the griever.

"You can talk to your department head, his assistant, or to the general foreman, but try to talk to your shift foreman! He thinks you're picking on him."

Staff Worker: "In general, the fore-

man does not care to know the contents of the contract, and even where he does know, he won't take the time to follow up on disciplinary action by putting them in writing. He could use the contract, if he would want to."

The sum of the above comments is that workers criticize their foremen for taking the easy way out, putting expediency before principle, and evading the workers' communications. The staff worker's criticism lies in the area of non-cooperation. The foremen's criticism implies an inferiority complex, a feeling of inadequacy that brooks no questioning. Higher management's complaint is that the foremen do not (not cannot) think problems out. Isn't the fundamental art of management the ability to think? Can you blame top management for bringing into the organization the "loopers" (college graduates who make the circuit) whose basic training is in thinking?

Let us now analyze the foreman to find what makes him tick. Here is a good definition of a foreman: "A foreman belongs to that group of supervisors who are in immediate contact with the workers; who are at the bottom of the management ladder and cannot pass the buck, but must depend on their human relations, their leadership, and their acceptance by the men in order to most efficiently carry out production planning."

The foremen as a group feel that they are somewhat removed from "planning"; yet are enough of management to be held responsible for results.

Three Main Types of Foremen

Although there are many types of foremen, I would like to suggest that foremen all too often fall into three general classifications: Newer, Established, and Settled.

The Newer foreman, in general, has been the most exposed to the union influence—to the ego satisfaction which is an underlying feature of unionism. Also, by nature of his youth and inexperience he is the last foreman to fully understand the basic principles of a company economy. He has to depend mainly upon his enthusiasm and initiative to lead his men. This foreman is naturally the most prone to rush into foremen-unionism as a panacea for his frustrations—such as being by-passed on promotions, or having nothing to say about decisions which affect him adversely.

The Settled foreman, of many years stature, usually is well set in his views and can look back to the days when he had the right to hire and fire, and is the least apt to understand or even apply the good human relations principles of getting along with his men. Because of his age and tenure he safely falls back on his authority in order to direct his men. Also, he is quite apt to refuse or fail to recognize the need for training, and readily analyzes the whole situation as a usurping of power by the unions. He is the least apt to unionize, only for the reason that he is allergic to change.

The Established foreman lies somewhere between these two. He has seen enough changes in working conditions so that he accepts another change very readily. He has become accustomed to having his thinking and planning done for him. Consequently, he will serenely follow a foremen-union course if he is told it will lead to a foreman-Utopia. He acknowledges his need for training, but with tongue-in-cheek he really believes that there is very little more that he should know. He is ready for a better job, (whether he and higher management are of the same opinion is another matter) and most of all the three groups, resents being by-passed.

Foremen's Work Is Collective, Also Competitive

Each departments' foremen constitute a formal group working collectively, but also competitively. The common goal is efficient, economical operation; the individual goal is personal advancement—betterment of his own personal economy. The competitive standards are formally set up in "bogey" figures based on daily, weekly, monthly, and yearly production performances. If the foreman gets incentive earnings they are probably based on these same performances. Another competitive standard—call it informal, unrecognized, or hidden—is that foremen compete with each other in getting into the good graces of the boss. To be the closest, to be the favorite, is the acme of many a foreman's ideals. To him it is the necessary step for advancement. He overemphasizes these relations with the boss to the point where they eventually overshadow everything else. He conveniently forgets, shuns, and ignores such things as long-range plans for improvement. Thus he disrupts the collective improvement of the company, the department, his men, and finally himself as well. Similarly, his bogey ratings motivate him to the extent that he feels responsibility only for the production performance of his own shift. The department and the company are forgotten. Some foremen are not averse to creating production problems for the following shift or shifts. This practice naturally is detrimental to over-all production. But it seems beneficial to him, in that any drop in others' bogey figures emphasizes the prominence of his own.

This foreman loses sight of the fact that in the eyes of his men he is the company and that these semi-hidden tactics are seldom respected by his men and are eventually reflected in general morale. This foreman spends more time on conniving than he does on constructive thinking and planning. He neglects his worker relations, his camaraderie with his men, which has to be done and can only be done at the appropriate time, and which is an essential part of leadership; his understanding and knowing. The responsibility of being a natural spokesman for his men is subordinated to his own personal problems.

To sum up, we find some foremen in a dilemma with many forces, psychological, economic, social, tugging at them in opposed directions. We cannot look to top management for a solution. Although they are willing and ready, also hoping, to help establish the foreman as a real part of management, they are stayed by the fact that any plan or help initiated at their level will be tainted with the implication of paternalism. The first-line foreman who wants to become a truly functional member on the management team will have to learn to surmount the barrier of superior-subordinate frictions. He will have to learn that he can both get along with his superior, and at the same time present his own views in a carefully considered, objective fashion as befits a partner on the management team.

To me a serious criticism of some foremen is that they have been so completely indoctrinated with the over-all importance of getting along with their superiors that they do not try to differentiate between honest disagreement and insubordination They take the easy way out, become yesmen who are completely under the domination of their bosses. They then react by withdrawing into a shell of silent resentment. Eventually they may join foremen's union in an attempt to regain self respect.

Atmosphere That Creates the Silent Resentment Attitude

For those who may question the atmosphere that creates this attitude of

silent resentment today, which was not a condition of yesterday; frankly, in the days of pre-unionism foremen did not repress their resentment, but passed it on to the men under them. Nowadays, this just isn't done. If and where it is, there are labor troubles. Where it isn't done, foremen develop who feel that, "as frustration piles upon frustration, with no adequate outlets at their own somewhat remote level, foremen-unionism sometimes appears to be the only alternative."

What are the symptoms of this "formanitis"—this malignant growth in management which can crop out in foremen's unions? Many of them are hidden, some semi-exposed, others are very apparent. Supervisors should survey their own companies; ask themselves these questions:

1. Are your foremen earnestly striving to understand their crews to the same extent that they want to be understood by higher management?
2. Are they looking toward production with the long-range point of view; or do they work strictly for their own bogey record?
3. Are they letting their frustrations, their petty annoyances, their personal problems get to their men either carelessly, accidentally, or deliberately?
4. Are they actively promoting general morale—subtle company accentuation (good company, good department, etc.)?
5. Are they presenting and answering men's requests, reports, and complaints?
6. Are they participating in foremen-group activities such as management clubs, semi-social functions?
7. Are they actively supporting the company on the outside?
8. Are they stockholders?

A favorite cliche used by foremen today is "Responsibility without authority is hell." Foremen naturally resent loss of authority. But I have yet to hear one foreman sympathetically discourse on the loss of authority by all higher levels of management—authority lost to the unions. As far as the foreman is concerned, he does not stop to think. He does not realize that to replace this void, top management has given him the right to participate in management. The few strings attached to this right, such as earning and being worthy of this right, which require initiative and training, are politely ignored. A necessity for any supervisor who wishes to advance or even to hold his job is an ability to get along with his superiors. This is all very well and is a good rule to follow, but moderation in most things is also very good practice. An executive vice president said, "While we don't want anyone to be classed as a chronic kicker, we certainly do respect any man who has a sincere criticism."

Understanding the Actual Motive for Improvement

With this tenet of advancement goes another—modern precept of management—which is subtly creeping in; "unsatisfaction is the primary motive for improvement". A steel company president says, "The foreman is not a lackey for someone in the front office." A very prominent industrialist writes, "It is a good sign when occasionally a man will speak out to his boss."

The foreman sometimes tends to neglect this right of participation in management—his right of dissent, the right given to him by both his men and management. He should consider himself a front-line leader and a vital part of the line of communications. In too many cases the foreman has lost the aggressiveness which won him his spurs as a supervisor and has drifted into the status of one who just goes along. In this latter capacity he communicates upwards only the things his boss wants to hear, or communicates unpleasant things in such a manner as to distort their meaning, and/or lets the grievance man handle complaints. This foreman reacts to his responsibilities only as he thinks his boss—not the company, nor his men—thinks he should.

That this unquestioning attitude of the yesman is not appreciated by some superiors is demonstrated by the following example. A department head, while discussing a foreman, once said to me (not in a depreciatory manner but in a matter-of-fact, explanatory sort of way), "If I were to tell him to climb that column and paint a yellow stripe around the top of it, he would do it without hesitation or question."

Today foremen in general are doing little but giving lip-service to their desire to become truly functional members of the management team. Also, the foreman does not recognize that this lip-service coupled with this social acceptance of unionism and a misguided response to the basic urge for recognition is slowly but surely causing him to drift towards foremen-unionism. Once attained it will forever block his rightful participation in management.

The present situation is one where the foreman represses his frustrations and lackadaisically performs his duties, or projects the blame for his troubles onto his superiors, his men, his company. He works antagonistically, or is trying to gratify his urge for ego satisfaction by butting into the brick wall of superior-subordinate frictions.

How can we go about counteracting this trend and building a first-class, hard-hitting, progressive, and cohesive management group? How can the foreman be stimulated to make himself think, objectively to see himself in his own work situation, to appreciate his obligation towards creating a harmonious working area? Management or supervisors' clubs are one of the better tools for this purpose. These clubs are primarily designed to bring about integration of the various levels of management in an informal way. Such clubs foster interchange and exchange of ideas, and provide inspiration leading to a common goal. A management club is a very useful tool to combine the various informal groups of management; foremen, general foremen, assistant department heads, and on up, into one large management family whose common aim is to get along with one another, called unity-in-management. Is top management aware of a void in foremen leadership? I think that top management, although aware that the greatest untapped asset in industry today is the difference between what your employees do and what they could do if they wanted to is by omission, inadequately emphasizing the most vital area of attitudes—the foreman level. Top management is complacently assuming that the foremen are too intelligent to follow the illogical path of unionism. Top management, although aware of the departmental management problems, assumes the foreman will, through his own initiative, help correct this situation.

In general, foremen feel this situation is not of their making and therefore will not accept the responsibility of training themselves. They would sooner accept a bad situation than try to correct it. Foremen are not entirely repelled by union methods, contrary to what a large segment of management may believe.

Now if the foreman won't or can't lead himself into his proper management setting, then where does the ultimate responsibility lie?

When top management becomes fully aware of the innermost struggles that beset the foreman's mind, an inspiring, sincere leadership will be initiated at the proper levels. The foreman will then be worthy of the management team.

The Factory of the Future: Completely Automatic,—A Technological Dream Coming True

by Harry Lee Waddell

In this thoughtful article is discussed a modern industrial dream that is, under the eyes of practical management men, working its way into reality. This author goes into details, analyzing the reasons, sociological as well as mechanical, why the automatic factory must come into being. He gives a complete picture of what this factory will be, how much of it is already here, what its drawbacks are and can be, how it may change procedures and ideas of production, and in general gives to management men a view of the factors that may govern their operations in a near tomorrow.

THE factory of the future is already becoming a reality. In a growing number of plants it is a reality. To be sure, there are few if any fully automatic factories with one master mechanism controlling the entire manufacturing operation. This is the dream. It will remain a dream for a long time. But the principles that we shall discuss here as underlying the factory of the future are in use, piecemeal, in many plants today.

The subject breaks down into five main topics: first; what do we mean by the factory of the future? second; why is it on so many people's minds today? third; some popular misconceptions about the factory of the future; fourth; drawbacks to our progress toward the factory of the future; and fifth, the effect of competition on the realization of the factory of the future.

The factory of the future is based on three closely integrated concepts.

Continuous Production Is First Requisite

The first is the concept of continuous flow of production, a too well known idea to discuss at length. It has made great strides in all kinds of industries, yet has a long way to go in many others. Continuous flow alone does not make the factory of the future. Visualize some continuous assembly lines, certainly examples of flow production, and you'll see how far they are from using the other two basic concepts of the factory of the future.

Mechanical, Not Human Energy

The second of these is the substitution of mechanical energy for men's perceptive senses, as well as for their muscles. Incidentally, I am using "mechanical" merely as a convenient term to include mechanical, electric, electromechanical, electronic, hydraulic, pneumatic, sonic, atomic or any other medium of power transmission which can be made to convey intelligence.

The history of the development of the industrial system and the factory system so far has been very largely the substitution of mechanical power for muscle power. Now, the next move in our evolution—and there are signs that it is coming so fast that it may approach the speed of what we call revolution—is the substitution of mechanical power for men's and women's senses of seeing, hearing, and most important, for their sense of what the psychologists call proprioception, or the ability to constantly make a judgment as to the position of any object in space and to adjust what they do to that position. Such mechanization does more than lift and carry. It senses; it applies the information received by sensing; and thereby adjusts the muscle work that is already being done by mechanical power.

How Proprioception Differs From Perception

Let's take, for example, the sense of proprioception. In a highly mechanized plant I know—we'll call it Plant X—a group of women workers puts washers and other fittings in place on sparkplugs as the plugs pass on a conveyor. It's a simple job from the standpoint of physical energy. What those girls are supplying is the sense of space-relationship that enables them to put the fittings neatly just where they belong.

As an example of the senses of perception: If you have workers in your plants who look at a liquid level, or observe how far a cutting tool has trav-

eled, or search for flaws in a piece of cloth, and then take some action or make some decision on the basis of what they observe, then you're using their sense of sight—plus their memory of judgment, which leads me to my next point.

Importance of Closed-Loop Control Systems

The third basic concept of the factory of the future is the feedback or closed-loop control system. This isn't as formidable as it sounds. Most of you have such a system in your home if you have a furnace with an automatic thermostatic control. That's a closed-loop feedback system. The temperature of the house regulates the furnace because of the effect it has on the control system which you have set to the temperature you desire. If the temperature goes too low, the furnace turns on; as it approaches the proper temperature, it turns off. It stays turned off until it goes too low again, and so on.

In our human bodies these feedback control system has reached its highest state of engineering perfection. One example: A ball player in an outfield. As soon as he sees the batter swing and hears the crack of the bat and knows that there's a fly coming into the outfield, he runs to be at the point where that fly ball is going to come down to him so he can catch it. And yet he doesn't make a firm and final judgment at the time he starts to run toward where that ball is going to come down. He is constantly making an adjustment, so smooth that it's imperceptible to the spectator. (These feedback adjustments should be smooth, or else they're not efficient.) He keeps adjusting all the time. Slight adjustments in his speed, slight adjustments in his direction. He's "taking a reading" constantly of where that ball is going to be. This is feedback control.

An Industrial Example of Feedback Control

Now in an industrial plant this very, very much simplified explanation will illustrate. For the sake of example, at a certain juncture in a process the critical condition which must be controlled is the thickness of a sheet of material—let's say a sheet of plastic. The sensory device then is a thickness gage. This could be a continuous gage, perhaps using radioisotopes, or perhaps simply making a physical measurement—a micrometer, in effect, that the sheet passes through continuously.

This gage detects, by what is really akin to the human sense of feel, what the thickness of the sheet is. It transmits that information to the collator. The collator passes this information into some sort of memory device. The memory device can be as simple as a cam. In some systems, when there are many factors to control, it can be as complicated as an electronic computor. The memory device receives the information as to what is actually the condition in the process, and matches this against what the process situation should be — in other words, what the thickness should be. Then this memory device has something else in it beside a memory of what the condition should be. It also remembers what needs to be done to bring the actual situation into line with the should-be situation. Now if the sensory device (the gage) is telling us the sheet is too thick, then the memory device remembers what should be done to the process to make it thinner. It passes this information back to the collator, which in turn sends that information to the effector.

Signal Amplified by Servomechanism

This is the servomechanism. First it amplifies the signal from the collator (since this part of the control system is at very low power) until the power is great enough to actually change the system. Then the effector—by a motor, or some other mechanism applying power —adjusts the rolls that are pressing out our sheet of plastic material so that they will thin the sheet down.

All the time, the sensory device is reading what the thickness of this sheet is, and is transmitting this information to the collator. When the thickness gets down to what the memory device knows it should be, the memory device signals that it's time *not* to turn that roller down any more, and so on.

This is the closed-loop control system—a simplified explanation as it applies in industry. This example describes a single process. Feedback controls can also tie two or more processes together to extend automatic operation to more and more of the plant's whole production operation.

Every time an employee in your plant observes a process and turns a valve to regulate the flow of gas to an oven burner, or water to a cooling jacket, or compressed air to a cylinder — every time he sees that a tool is cutting too deep and adjusts it slightly—he is acting as a control system. He is performing the whole complex of tasks that a closed-loop control system must perform to give us a self-regulating mechanism. I am sure you can see how such a system could be used in many applications of every plant represented here.

There are two main reasons:

One, developments in technology—and, more important, developments in our thinking about technology—have made a highly automatic factory a technological possibility. As a result of the super-fast development in World War II and since, electronics, for instance, have reached a state of development far beyond that of a decade ago. The complicated fire control devices that trained guns on a moving target, computing its speed, the wind velocity, and even the enemy's probable evasion tactics, make some difficult industrial problems look pretty simple. Such technological advances have opened the eyes of alert engineers and progressive managements to a whole horizon of mechanization in every factory in the country.

The second big factor that puts the factory of the future on so many people's minds is, in my opinion, more important than even the technology and the realization of what technology can do. This factor is really a complex of others. It's the whole social and economic situation which is demanding the great increases in productivity that we can achieve only by a more automatic factory. Furthermore, the social and economic situation is demanding the pleasant and challenging kind of work that is available in the factory of the future. Now let's take a look at some of these socio-economic factors.

Population Growth is Vital Factor

The first one of them is population. Our population is not only growing, but it's changing in composition. By conservative estimates, we will have a growth of 25-million in our population between 1950 and 1960. This is an increase of 16 per cent. To emphasize the importance of this point — 25-million more people, between 1950 and 1960—I should add that what has happened in the first two years of this decade makes the estimate seem quite reasonable as to population growth and the size of the work force.

If we were to make no increase in our

standard of living whatsoever, it's perfectly obvious that with fewer people doing productive civilian work, relative to the increased population, we must increase output per worker. Certainly the American public does not want to settle for a continuation simply of the present standard of living, high as it is. We will demand, I am sure, a rate of growth in the physical standard of living which is comparable to the rate of growth in the past. This demands increases in productivity so large that they can be achieved only by the factory of the future.

Living Standard Depends Upon Increased Productivity

The next big socio-economic factor is the greater realization on the part of workers, and of the whole population, that increases in our physical standard of living do depend upon increased productivity. In spite of the fact that there are often discouraging evidences to the contrary, I think this realization *is* increasing. There's not much question about it. The so-called General Motors type of contract, basing an annual increment in wages on increases in productivity, and the adoption of this type contract throughout many other parts of industry beyond General Motors, is significant indication that workers, and even their unions, are realizing the effect of productivity on their real income. Regardless of the technical merits of the G.M. type of contract, the important point is the emphasis on productivity as the source of a higher standard of living.

There are other evidences that a broader segment of our population is coming to look on increases in output per man-hour, not as something to be afraid of, but as something that makes possible the increased standard of living that the people have enjoyed. And make no mistake about it, our standard of living, our "real income," has increased. "Real income" per capita has doubled in the last 50 years. It has risen 42 per cent since 1929. Realization of that gets around and has its effect, no matter how unpleasant workers may be, in some special situations, about our efforts to increase output per man-hour. And no matter how critical we all have been of the political Administrations in the last 20 years, what has happened to per capita real income cannot be denied.

The third factor in our socio-economic situation that is pushing toward the factory of the future is the growing educational level of the mass of population. This is a little harder to pin down than the other factors, but no less important. I am sure you'll agree that our people are better educated, on the average, than they ever have been in the past. We have relatively fewer people who are uneducated, who are unappreciative of intellectual pursuits. And this makes the general average of our population demand a higher *intellectual standard of living*. We don't have time to argue the point here, but I think there are dozens of indications that the public has been raising its demand for intellectual satisfaction. The astounding popularity of adult education is only one such indication.

These demands are effective right in your plants because your workers spend more of their waking hours on their jobs than any place else. They demand more challenging jobs. They demand jobs that use their intellectual powers to a far greater extent. They don't like menial jobs. And this is pushing us toward the factory of the future, because the automatic factory offers the kind of jobs that only better educated and better trained people can fill.

Now these socio-economic factors, plus our consciousness that we have the technology, have joined together to produce an urgency for the factory of the future that cannot be denied. A quotation from Victor Hugo is apropos: "No army can withstand the strength of an idea whose time has come." The time has come for the idea of the factory of the future.

Popular Misconceptions Stand In the Way of Progress

Of course, there are some "armies," in effect, that are making a stand against the factory of the future and checking its advance in some companies.

The first of these is that it will cost too much.

My answer to that is that costs are only relative. If we are going to have a larger increase in the population, percentage-wise, than in the work force, we are going to have a labor shortage for the next ten years or so. And this means that wages, regardless of transitory influences, are going to at least stay up, probably even rise, relative to the rest of the price level. Certainly our history amply proves that the route of wages is upward.

This means that nothing is constant about the cost of capital equipment. As labor rates go up, capital equipment becomes cheaper because it can make more productive use of labor. So the cost of the factory of the future is not a real deterrent to our realization of it.

Another popular misconception about the factory of the future is that it will create excess capacity and that this is uneconomic and will surely lead to a depression.

My answer to this is that our ideas about what constitutes excess capacity are changing. The great scarcity in this country used to be capital equipment. That was the limiting factor. The great scarcity broadly in industry now is labor and not capital equipment. Once we could not tolerate idle equipment. It meant a depression. The situation is different now. One influential company has expressed the point by saying that it considers the losses it suffers from not having enough capacity to meet surges in demand to be greater than the overhead charges on that capacity when there are not surges in demand. It is backing up that philosophy by investing hundreds of millions of dollars in capacity that will be greater than the projected "normal" demand for its products.

Furthermore, all of our social legislation has so increased the overhead cost of fluctuations in size of the work force that it is fast becoming cheaper to have more machinery capacity, even if it is idle, than to have large fluctuations in a human labor force.

The third misconception about the factory of the future is that maintenance costs are prohibitive.

This simply has been just 100 per cent disproved by experience. In those plants which have become, today, the factories of the future, the experience is that maintenance costs per unit of output have gone down, although the maintenance job is tougher. The reason that maintenance costs have gone down is that management, realizing the potential of high maintenance costs in a highly technological, mechanized plant, has given some real attention to the problem, and they've licked it. Maintenance cost is not the bugaboo that some people think it is in the factory of the future, in the largely automatic factory.

The fourth misconception is that labor-saving is the only real advantage of the automatic factory.

Labor-Saving Not The Only Advantage

This is disproved by events. There's no speculation about this point. The

places where the factory of the future has made its most progress right today have shown that the benefits run far beyond freeing people for other work. The places where automatic operation has already made its great gains have been where the factory of the future has done jobs that are beyond the powers of human workers; where tolerances that have to be met, for instance, are so close that mechanical gaging and mechanical perception have had to be substituted for human perception. In the petroleum and chemical industries, where automaticity has made great strides, the reason for that progress is that their processes are such that human beings couldn't possibly do the jobs which instrumentation and control systems have done. So that if we were to stake our whole case for the factory of the future or simply its labor-saving aspects, it would be much slower in coming than it is going to be.

Automaticity Not Restricted To Large Factories

The fifth misconception is that job shops can't become more automatic; that the factory of the future is only for the large mass industries.

This is not necessarily the case. Developments such as the devices to operate machine tools by means of punched tape or magnetic tape can have their greatest utility in the short-run machine shop, for instance. Once the directions to the machine have been put on tape, that tape can be used to make a few dozen or a few hundred parts, then easily filed until another order for this part comes along. That will be much more economical than storing the operating skill in a complicated special machine tool, or in a blueprint that requires even a skilled machinist to "relearn" how to make this part efficiently when an order turns up.

Furthermore, a few so-called job shops making relatively small numbers at a time of widely diversified products are realizing that many of their component parts can be made in straight-line production, which is the prelude to at least partial automaticity.

Many job-shop-type companies will probably never become wholly automatic, but there is no reason for them to be left entirely out of the second industrial revolution, as some people have called it.

The sixth misconception is expressed by the manufacturer who says: "The factory of the future sounds interesting, but of course it wouldn't apply to my process or my product."

If he continues to think of his present process, or the design of his present product, as sacred, of course he'll be left behind. The point is that he can progress toward the factory of the future if he is willing to take a whole new look at his process, probably change it entirely—particularly in the light of what he may learn if he takes a whole new look at the function of his product.

Factory of Future is Better Place To Work

The seventh misconception about the factory of the future is that it will be a super-monotonous place to work.

This isn't true. Indeed, the factory of the future is coming in many industries simply because it makes that plant a better place to work. In a factory that uses simply the perceptive senses of its workers—their ability to see, their ability to hear, their proprioceptive sense of being able to guide a piece of material to the right position in the machine—the jobs don't use the full capability of even a half-way intelligent person. The human system is far, far over-designed, over-engineered for such simple jobs. Those jobs should be done by the kind of mechanical equipment that is coming into the factory of the future. And the highly engineered human system should be saved for work that offers a challenge to it.

That is exactly what happens in the factory of the future. And as I said several minutes ago, that's one of the important influences that is bringing the factory of the future, because there are better, more challenging jobs in it. The factory of the future is not making the human being obsolete, as some misguided interpreters of what has been said on the subject have indicated. What it is really doing is making obsolete the *misuse* to which we have in the past been putting some human beings. It is giving them much more challenging and satisfying jobs. And, believe me, there are plenty of challenging jobs for human beings in the factory of the future.

Now the last misconception I'd like to discuss is that the factory of the future will produce vast technological unemployment.

I think the rebuttal to this is quite clear. As we increase production—and we must do that to keep up with the increased population—we build greater and greater need for people in distribution. Distribution can probably absorb many more people than will be freed from monotonous jobs in plants as the factory of the future progresses. Production employment today in manufacturing is about 12½-million — up about 4-million from 1939. Yet our total employment since 1939 has risen from 45-million to roughly 62½-million—a gain of more than 17-million. In other words, we have had to add to our total employment at four times the rate we have added to our manufacturing employment to achieve the total progress of producing and distributing an increasing supply of goods.

To be sure, if we were to make the transition overnight from the factory of today to the factory of the future, there could be upsets so great that we would create temporary technological unemployment. The plain fact is that we will not make this transition overnight. The greater danger, in my opinion, is that we will make the transition too slowly, not too fast, to keep our standard of living going up.

Does all that I've said in refuting these misconceptions indicate that we are rushing pell-mell into the factory of the future, that there won't be any bumps or roadblocks along the way? Not at all. There are some very important . . .

Actual Drawbacks to the Factory of the Future

The No. 1 drawback is the shortage of engineering talent of the type needed. It's not a shortage simply in numbers of engineers, which we've heard so much about. It is more a shortage of engineers whose knowledge spans a broad enough field to be able to encompass the various technologies that are needed to put the factory of the future together.

It's been said that what we need are more "hyphenated" engineers—electro-chemical, electro-mechanical, and so on. We also need a great many technological and scientific specialties in our people that have not been traditional parts of most engineering courses. Right now, as a reality in industry—and I've talked to scores of people who are working toward the factory of the future—the big drawback is engineering talent.

The second drawback is closely allied. It's the shortage of management people, particularly engineering management, who can conceive and comprehend what can be done, and who know enough to inspire it to be done, and to coordinate it. These management people you might call engineering generalists. Industry

hasn't trained enough of them. It's difficult to do. I think the colleges must do more and more of this training than they've ever done before. And I think, in passing, that one of New England's great advantages is the outstanding college training of engineering generalists that you have available here.

The third drawback is the concentration of engineering development work in the military line. Short-term this is a serious handicap. Many companies right now could be making faster progress toward the factory of the future if it were not that so much of the engineering talent and so much of the manufacturing capacity for control mechanisms, and so on, is devoted to military orders. But for the long-term, I think this military concentration, if it doesn't continue forever, will speed up the advent of the factory of the future. It is, in effect, subsidizing the developmental work at a faster rate than industry could afford to do this work. And so, while the concentration on military is a short-term drawback, I think it is a long-term advantage.

Now while I said that the No. 1 drawback was the shortage of engineering talent, I think the greatest over-all drawback is our old enemy inertia. And I don't mean just a satisfaction with things as they are, though that's part of it. I mean the lack of a dynamic concept on the part of those people who run industry. The lack of a realization of, and participation in, all the changes that are going on about us. The lack of what you might call a corporate aliveness.

I've heard several management people say, after listening to discussions of the factory of the future: "Well, I guess what we'd better do is burn our plants down." There's more truth in that than you'd think. Two outstanding examples that I know of, where companies in industries that were pretty backward technologically have really made remarkable progress toward automaticity, have been plants that have been rebuilt after fires. And, despite what some of my cynical associates suggested, these companies' progress was not due to the fact that fires turned their fixed assets into cash. In neither one of these cases did insurance payments even approach the cost of rebuilding—particularly of rebuilding along the lines of the factory of the future. Actually it was inertia, not fixed assets, that was burned down. A challenge was created when the old plants were burned down.

Competition Will Make Future Factory a Reality

Competition is the driving force that will make the factory of the future a reality, even in companies and industries that are not inclined to be among the pioneers. Last fall I visited a new plant on the West Coast, right beside an older plant of the same company. The new plant was the same physical size as the old one. It had the same amount of processing equipment within it. But it was an automatic plant. It was turning out 100 per cent more product than the existing plant with 60 per cent as many people. And it was a better product.

Because of present boom demand, this company is operating the old plant right beside the new one. What if demand should ease off—or if more new plants bring supply and demand more nearly into balance? Obviously this company would concentrate its production in the new plant. Think what that could do to lower its costs! What's going to happen to its competitors if they don't have plants like the new plant? That company's competitors will *have* to invest in similar new facilities or surrender the market to the lower-cost producer.

That leads us to another aspect of the effect of competition on the realization of the factory of the future. We might consider that an economic rough period, a recession, would delay our progress toward it. Certainly it would alter the timetable. But with the extent of the progress already made and, more important, the vistas in conception opened up to progressive planners in industry, a leveling off in demand may be a powerful spur to progress in automatic operation—because it will make the stimulus of competition even more effective than it is today. In a tight competitive battle for cost reduction the possibilities of the great increases in productivity opened up by automatic operation will be difficult to resist.

I'd like to close with a quotation from the Society for the Advancement of Management that sums this up better than anything I've ever read. It says: "No war, no strike, no depression, can so completely destroy an established business or its profits as new and better methods, equipment and materials in the hands of an enlightened competitor."

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MODERN ENGINEERING CAN ALMOST BE CALLED AN EXACT SCIENCE; each year removes it further from guess work and from rule-of-thumb methods and establishes it more firmly upon the foundation of fixed principles.

The writer feels that management is also destined to become more of an art, and that many of the elements which are now believed to be outside the field of exact knowledge will soon be standardized, tabulated, accepted, and used, as are now many of the elements of engineering. Management will be studied as an art and will rest upon well recognized, clearly defined, and fixed principles instead of depending upon more or less hazy ideas received from a limited observation of the few organizations with which the individual may have come in contact. There will, of course, be various successful types, and the application of the underlying principles must be modified to suit each particular case . . . The first object in management is to unite high wages with a lower labor cost . . . this object can be most easily attained by the application of the following principles:

(a) A Large Daily Task.—Each man in the establishment should daily have a clearly defined task laid out before him. This task should not in the least degree be vague nor indefinite, but should be circumscribed carefully and completely, and should be easy to accomplish.

(b) Standard Conditions.—Each man's task should call for a full day's work, and at the same time the workman should be given such standardized conditions and appliances as will enable him to accomplish his task with certainty.

(c) High Pay for Success.—He should be sure of large pay when he accomplishes his task.

(d) Loss in Case of Failure.—When he fails he should be sure that sooner of later he will be the loser by it.

When an establishment has reached an advanced state of organization, in many cases a fifth element should be added, namely: the task should be made so difficult that it can only be accomplished by a first-class man. . . .

• • • ***Frederick W. Taylor, Shop Management***

Implementing Interchange of Know-How Between Business and Government

by Harold F. Smiddy

In this article one of the important management problems of today is neatly outlined and completely detailed. The author makes four major points, then follows them into the fields of industry and government, contrasting and comparing, illuminating each point by example or personal experience, until he relates the various areas of interchange of know-how to both the management situation in the United States and the role American management must prepare to play in world affairs.

How can we best tackle the topic of the interchange of management know-how between business and government? It seems to me that a four-way coverage may be useful. I will deal, (1), with the *desirability* of interchange of management know-how between business and government; (2), with some of the *barriers* to such interchange, as they have impressed me from time to time; (3), with the *facilities* available for improving such interchange; and (4), with a few of the *advantages* which might come to all concerned, including the public, if the indicated kind of interchange of information can be made more effective and be appreciated on both sides.

It would seem that in a country and government such as ours, the benefit of information exchange may almost be taken for granted. Our country, its government, and our business institutions have increasingly become so complex, and at the same time so interrelated, that unless there is adequate mutual understanding, the consequences are certainly bound to be bad for everybody.

The administrator in government naturally feels that in conducting government affairs in the interest of the public, including businessmen and their employees and customers, he should have facilities that will permit him to understand businesses' methods of organization and management and their ideas as to how authorized government operations can be meshed with business voluntarily and harmoniously on both sides.

On the other hand, from the viewpoint of the businessman, who both personally and through his company supplies much of the tax revenue that pays for government operations (who also must so manage his own institution that it functions in an intricate pattern of government relationships): he certainly wants both to know how government affairs are run and to contribute any help which will make the process better, both for the public and for himself.

Business, Government Operations Are Differently Motivated

Such mutuality of general viewpoints, however, does not indicate desirability of interchange of management know-how between business and government on any premise that their problems are completely common and therefore that what will work in one, will also work in the other. There are important differences, and unless these are recognized by people in both fields, misunderstanding, ill will, and unnecessary costs and frustrations can too readily occur.

Fundamental to such points of difference is, of course, the fact that the respective operations of a private business and of a government agency are instigated and conducted from basically different types of motivation and to achieve basically different types of objectives. In a sense these objectives could be more appropriately discussed under my second topic, but I think a few of them are fundamental enough to mention here.

Business, even in our interrelated and complex economy, is conducted fundamentally under a profit motivation. This is true no matter how much the growth of specific organizations requires that a service motivation also be integrated into management's viewpoint in determining objectives and policies of the enterprise. On the other hand, a government agency is motivated fundamentally to perform a public service, the requirement to render which has been established by the people speaking through their legislative representatives. While there is, of course, a sincere desire to

administer such activities economically and efficiently on the part of the good public administrator, he doesn't have the specific yardstick, or whip, which comes from a profit-and-loss statement as such. His performance, as reflected in his costs as compared with his authorized budget, give him an equivalent yardstick, but in a deep psychological sense the two are not the same.

In other words, government activity differs fundamentally from a business enterprise in the nature of its goals, in the way in which such goals are determined, to some degree in the very comprehensiveness and vastness of operating on a nation-wide basis, and certainly in the rigidity which comes from definition of objectives, authority and even procedures through the statutory and regulatory approach rather than through the freer and more flexible ways that private business management can use with respect to corresponding factors.

There is still one other difference that is extremely important, and this is the extraordinary extent to which all government operations have to be conconducted, so to speak, *in a gold-fish bowl;* or at least conducted on the premise that at any moment they may potentially be subject to widespread public inspection and scrutiny.

Some Fundamental Points Of Similarity

On the other hand, while goals and means of choosing them, and while incentives and ways of measuring performance, may differ in the management of public and business operations, there are also fundamental points of similarity which are so vital as to make wide interchange of management know-how, in both direction, both feasible and desirable.

Of course the most striking of these similarities is the fact that in most cases you are doing the work with people; they are essentially the same kind of human beings whichever type of employer may be writing their pay checks. The problems are also similar in that the work involved is covering more functions, is becoming greater in scope, and is becoming more interrelated in both instances; with, of course, correspondingly increased complexity and resultant increased difficulties of coordination and administration for effective performance. And finally, in this respect, there is the fact which has been so painstakingly developed through the career of the professional management movement in this country and indeed internationally—as reflected in bodies like the Society for the Advancement of Management, the National Management Council and the International Committee for Scientific Management — that there are basic theories and principles of management, and of leadership of work done by human beings in utilization of material resources, which have wide application to extremely diverse types of enterprise, institution, and work.

Barriers to Interchange of Business, Gov't Know-How

Going now to the second of my four subjects; the barriers to good interchange of know-how between business and government.

Most of the barriers, while real, are in no sense insurmountable. Fundamentally, important barriers to interchange of know-how of any kind seem to me to reside usually in absence of adequate mutual understanding and confidence among parties who might gain common benefits by pooling some of their know-how.

Putting it very simply, I don't have too much patience with the government employee who damns business with fine fervor on all occasions and indicates that business is managed by a breed of more or less selfish creatures who would wreck the world and the people in it unless militant saviours on government payrolls police their activities.

Any such approach is merely evidence of the underlying reasons why government administrators have boundaries imposed on their efforts due to the fact that wise legislators over the ages have learned to write statutory and traditional limitations on the powers granted to specific government departments, and on the ways in which such powers may be exercised. Limitations of this type annoy the government administrator, (and I suspect they are even more annoying to businessmen who sometimes suddenly take over government administrative duties) but though they sometimes seem to be carried to excess, their existence flows basically from a deep and instictive realization that sovereign power can get out of hand. It is better to check it and retard it a little too much, than to turn it loose.

On the other hand, going further into this matter of barriers which arise from lack of mutual confidence and understanding, I have little patience either with the businessman who simply rears up on his hind legs and curses government operations and everything and everybody connected with them. Nor do I think that even when one of us decides that the way to fix something is to do it ourselves, and decides to move into government administration, we will be too effective if the task is approached in any such frame of mind. Governments have been running for about as many years as business enterprises, and with as many varieties. Present practices of public administration have as much history, tradition, and incidentally human sweat and knowledge, as is true with respect to the average business operation.

There is a real need for realizing that while principles of management of the work of men will be common to a wide extent for both governmental and business activities, there will continue to be great need for skill, understanding, patience and ability in applying such principles correctly, and in administering them with quite different emphases on the two types of activities.

However, the attempt will be quite hopeless, unless the approach is by way of understanding first that there are principles and theories which can be used to guide management work; that such principles and theories can be stated, then taught and studied; and that they can afford a base for intelligent application by skilled administrators with appropriate differences in scope and emphasis, in the management of organizations of either private business employees or government employees.

The Businessman's View of Statuatory Regulations

It is not unusual for some experienced government career administrators to feel that a businessman who comes to Washington and who turns out to be unskilled in the necessities for such statutory regulations, is somewhat naive, even a little stupid. It may not be the case at all in the great majority of instances. The businessman in such circumstances certainly tends to look on excessive rigidity with a different eye than the man who has been brought up in their shadow and has come unconsciously to accept them perhaps as being as natural as the Laws of the Medes and the Persians. I would suggest that here again, however, there is room for some mutual self-scrutiny.

Granting that such restrictions tend to arise fundamentally through desire of legislators to make impossible the mis-

use of the sovereign power of government, and much as this is desirable in the long run, it is still true that in a specific sense this type of restrictive statute has probably come into being through the active help, perhaps even the initiation, of experienced government people. If this is so, such statutes can of course be changed by the intelligent thought and constructive suggestions and aid of the same kind of people.

If the conditions under which they were originally enacted have genuinely changed, or perhaps if foresight indicates that they are about to change, I would say to you that rather than taking too much comfort in them and using them as a kind of false haven of security, a wise government career man would be much more helpful to be realizing ahead of time that they do need amendment or adjustment and himself be initiating the needed improvements; rather than hiding behind them to frustrate new administrators or to protect possible incompetents who may be using them to ride out the rest of their careers until pension time, with a minimum of personal discomfort.

Trend Toward Performance-Type Budget in Government

While we are on the subject of legislative restrictions as limitating factors or barriers in administration of public activities, I want to mention money, appropriation limitations, also. You are familiar with the movement to use performance-type budgeting, rather than a purely account classification approach in control of government costs.

The gist of it is that you budget, not (for example) the cost of stationery or office rent as such, but rather the cost of the program, project or purpose for which such outlays are made. This is a fundamental distinction and failure to understand it has been, and can continue to be, a real barrier to planning, organizing, integrating, and measuring or appraising the quality and effectiveness of the management of governmental affairs and work.

In fact, at this time when economy is such a popular word again, I suggest—to men with either government or business background—that such an approach affords the only hope for savings of really large magnitude, in government costs.

Of course, there are some wasteful and inefficient practices in any organization as large as our government today. Tighter and more demanding management can spot and correct such wastes. Where present personnel, or other administrative, practices are set by statute in ways that are no longer fully in tune with the needs of the future, those limitations too can be adjusted as required; especially with the constructive initiative and aid of experienced government career people.

Frankly, though, I personally doubt if the aggregate "savings" from even wide application of such tighter managerial standards, will produce genuinely major cuts in the present inflated level of governmental costs. Such truly large cuts can only be attainable by going back to fundamentals; re-examining the nature and scope of entire programs and fields of effort in which government is now embarked; and stopping in their entirety any which no longer seem to justify their cost in terms of public service which they render. Politically any such moves will promptly raise counter-pressures, not merely from those getting government salaries for such work, but more vocally and more importantly from those who consider themselves benefited by the programs to be eliminated.

It is in such directions that the needs will be vital to keep the over-all public interest in mind; to set policy with an eye to future rather than past conditions; and to think deeply as to what the citizen should do for himself, rather than through his government and its power to tax to pay for its programs.

Need To Integrate Public Programs

There is great need, accordingly, on all sides, to integrate all effort behind essential programs, in the public interest and in keeping with the best use of the economic resources available for both public and private activities at this time. Constructive and understanding aid and experience under these circumstances are terribly needed and must be applied with requisite vision and courage so that barriers to interchange of know-how between business and government may be torn down from both sides during this critical international struggle in which we are all, of necessity, participating.

At the 8th International Management Congress of CIOS, the International Committee for Scientific Management, in Stockholm in 1947, Mr. C. Tarras Sällfors of the Swedish Government summarized some of these particular difficulties in a paper which he called "Rationalization of Public Administration." His summary seemed so unbiased and so pertinent and comprehensive to me, that I think it is worth calling to your attention. Hence, I list as follows, with some minor condensation, the seven points which he made at that time, and which recognize such characteristic limitations on the application of known principles of Management to Public Administration:

Weaknesses in Practice of Public Administration

"(1) No profit and loss statement—No sales income or profit margin with which to compare costs of administration; hence usually a total absence of incentive to keep down costs which is of such effect in business.

(2) Salaries of higher positions are often not high enough; especially as compared with salaries for positions of comparable responsibility in private business. This limits ability to attract competent men for higher positions.

(3) Public servants often lack economic training, theoretical as well as practical. Hence, are generally not cost-minded, which every sales, production and financial manager in private business must be. Higher officials are often jurists, lawyers, statisticians, scientists or military officers with professional rather than economic point of view.

(4) Slowness of promotion for able men. Positions, salaries and appointments to better jobs fixed by legislative acts, so opportunities for promotion are limited. Also tendency to give undue weight to seniority in the question of promotions has been frequently a serious limitation on progress of able men.

(5) Slowness of changes in operation. Need to get concurrence of political administration and of legislature before making even badly needed changes, both causes delays and also causes staff to be slow to recommend. Likewise delays needed changes in staff, procurement of facilities and other phases of operations.

(6) Possibilities of public criticism necessitates much paper work. Risk of every public servant of exposure to public criticism, causes avoidance of even needed quick, or verval, decisions and tendency to compile protective record against future investigation. Also since making controversial decisions, no matter how badly needed, brings risk of public criticism but not compensating reward, and since criticism and publicity about any mistake may seriously hurt future promotion chances, good ini-

tiative is discouraged. Even involves personal financial responsibility at some subsequent date if a risk he takes works out wrong.

(7) Safety of position may induce public servants not to cooperate in betterment work. A man in a job fairly well up the line who sees little chance of further personal advancement, yet can't be replaced until he reaches pension age, tends to be a problem to superiors who may want to make organizational changes contrary to his personal desires."

Here I want to note a point which a skilled Public Administrator once called to my attention, and which was brought out in the paper on "Progress in Public Administration" at the same Swedish Congress. It is that public administration has itself been forced to undergo strains and gyrations in the last twenty years which have required real ability, courage and brains to overcome.

Government has had to expand to protect public health and security in the depression of the 30s; then to meet the global tensions and logistics of World War II; finally, before real recovery from that effort, (although after a lapse of time sufficient to dismantle many governmental administrative bodies) to respond on short notice to the greatly enlarged needs imposed by events in Korea. The point is that government has met these tests, both of expansion and of interim contraction, in what history will certainly show to be a distinctive manner, even though hindsight may indicate methods of correction in detail.

And this has had to be done without too widespread or accepted a concept of the true scope or nature of relations between government and private business. There is accordingly no need to deprecate the contributions of businessmen, scientists, lawyers, labor leaders, and others who helped, while pointing out that the career men in government had significant status during such programs and by their devotion, experience and ability had corresponding participation in the progress made.

How Interchange Can Be Facilitated

Going now to the third sub-topic, namely, facilities for interchange of management know-how between business and government, the first point which comes to my mind is that if the truly basic barriers come from lack of mutual understanding and confidence, the best facility for overcoming them must be some common meeting ground where men in these different areas can get to know each other; to understand each other's mentalities and attitudes; to become familiar with each other's problems; and so be able to help each other in the solution of such problems.

Here I am defining such professional associations as the Society for Advancement of Management. Similar bodies, either in functional fields like the Controllers Institute or the American Marketing Association, and at different governmental levels such as those covered by the National Management Council or CIOS, the International Committee for Scientific Management, are equally important and useful.

The diversity of functions handled by government is increasing and executive and agency heads have to be responsible, and also accountable therefor, in many more fields, to legislators and to the public for adequate administration of such diverse work. They have accordingly, the same problems of clarifying organization structure and patterns, of decentralization of authority both functionally and geographically, and of conducting long-range programs in the face of short-range appropriations and pressures which plague people in many fields of business.

Many Needs, Problems Same In Business and Gov't.

They have the same need for improvement of administrative techniques, for development of better methods and procedures, for work simplification, for devising of suitable incentives and rewards for performance, for building better budgetary practices, for devising adequate standards for measurement both of achievements and of compensation, and for distinguishing between capital and current activities, as is true in private business.

The public administrator has the same problems of personnel administration as the business manager, and maybe a few more because of specific peculiarities of government operations. Perhaps the outstanding of these flows from the condition which makes it a little easier to avoid true personal responsibility, both because of statutory limitations and limited delegation, and also because of absence of economic training and of a specific profit-and-loss incentive.

Finally, the need to exercise sovereign power in a "gold-fish bowl," which I mentioned earlier, is itself not to be sneezed at as a factor which imposes specific limitations on the public administrator which are, as yet, somewhat less applicable to the management of business affairs.

Need To Understand Management Principles

It is, therefore, fortunate that there are some fundamental management principles which truly are applicable to the organization of the efforts of human beings, and to the integration of the relationships among people in their daily work, whether they are in private enterprise or in government agencies; and the need to know, understand and fairly apply such principles is of the greatest importance in all kinds of management work.

I think likewise that under facilities for interchange of know-how, as we are here discussing them, the cross-flow of personnel between the two types of organizations is a strikingly constructive factor. Certainly it is an incentive for a government career man to know that if for any reason he ultimately becomes unhappy in such work, in spite of meritorious performance, he is not doomed to his present job for life, but can throw it up and take his chances with his brothers in privately-managed enterprises. By the same token, the man in private business who feels a call to service, or who feels that his own opportunities for either pay or satisfactions are greater in government work, can readily make the change. This cross-flow of personnel both benefits and leavens both sides, and the fact that it can exist is definitely a facilitating concept with respect to the interchange of management know-how.

It seems clear to me that there are facilities and bridges for such interchange, if both sides design and build them. Certainly such a method seems to me to be sounder than to have either one jump into the middle of the other's domain, make a few superficial studies of the mechanics of the situation, and blast forth as an expert in a field whose dynamics and traditions are not adequately understood.

In this connection I wish to pay tribute to our educational institutions and their faculties who are familiar with the principles of management as applied either to private or public administration, and who render such great aid to all of us through text-books, courses, talks, their services in management associations, as consultants to business, and as participants in government.

Schools and colleges constitutes one of the great constructive facilities to aid the flow of important management know-how between business and government.

There are, then, adequate facilities for interchange of management know-how between business and government, typified rather than adequately defined or bounded by the few specific examples I have given. The best way to get prompt progress, I suspect, is for all of us to think more about how we can use these available institutions and tools to facilitate such interchange; and about how we can improve their application through personal help, participation, and effort.

Advantages to be Obtained By Exchange of Such Ideas

My fourth and final point should have been covered almost automatically. It deals with the advantages to be had from overcoming the barriers and widening the facilities for interchange of know-how.

We are living in a world in which hates and tensions have dominated the headlines to a great degree. Technological advances, which have made possible the use of resources and the improvement of standards of living on a scale never before known to man, have also unfortunately given us tools for destruction, culminating in atomic and nuclear weapons which have possibilities of engulfing us all if we do not think clearly and act soberly.

Under such circumstances, it behooves men of good purpose, both to understand the principles involved in the global struggle which is taking place and to understand how to use appropriate principles to widen understanding and to lessen tensions, from the local neighborhood to the international sphere.

It has been my good fortune in the last few years to be able to travel to many countries, and also to meet in this nation with able men from many parts of the world. Such contacts bring home the fact that the big problems are common, and the big solutions are common, irrespective of how much our attention may be distorted by local difficulties, hates and ignorance.

The easiest thing for anybody is to act the demagogue and to sow the seeds of hate and tension. Such chores have been only too well tended in too many parts of the world, with results whose unpleasantness is only too familiar.

Long ago, when I was in utility work, in many towns in those days the electric utility company for which I worked had a line of poles cluttering up one side of a street, and the telephone company had another line up the other side. Home owners, who were experts in neither electric power nor telephone problems said that it did not make sense and asked that the condition be remedied.

For many years each type of utility defended its own position and insisted that it could not do anything; and that anyhow the mess was due to the other fellow's lines. Fortunately, before the public ire crushed the two sides, able men in both industries got together and established joint agencies to see what could be done in a constructive and positive sense.

It was on one of these committees that I first was fortunate enough to hear a very able national leader make the point that progress could only come if we found areas of agreement, however narrow, and then widened them; rather than by stressing differences and thereby making them more destructive. That is an old story but these utility companies shortly found that difficulties of a technical nature actually rested on a mutual base which could be examined objectively and intelligently, and were therefore susceptible of progressive reconciliation and cure, not only to the advantage of the public, but actually to the increasing economic advantage of both companies.

The advantages of cooperation in any field of effort—local, national or international — are correspondingly great. The true need today is for people who can see how to integrate the efforts of men of good will, not only across the boundaries of different occupations and industries, but also as between business and government, and indeed between governments all over the world.

When you seek thoughtfully for initial areas of agreement, where the minds of reasonable men can find common ground from which they can widen their spheres of confidence and of free interchange of knowledge, of trade and of people, there are not too many basic starting points. In one large business firm, faced with both national and international operations, its executives have said that there are at least three. The first is in the sphere of the great religions, whose truths do not stop at national boundaries. The second is in the area of science, in finding the laws and secrets of nature which similarly do not respect man-made state lines. The third area in which it seems to us that there is a similar field of truth and principles on which men of different cultures and backgrounds can agree, is that of professional management.

Broadly, on this topic of interchange of management know-how between business and government, even a cursory examination demonstrates that the desirability of such interchange is very great; that the barriers to it are known and can be analyzed and overcome; that the facilities for conducting such interchange are already present in at least sufficient degree to permit useful expansion of present efforts. The advantages from doing so go far beyond the direct benefit of any single meeting and indeed are one of the truly fundamental means of dispelling the hates and tensions which are keeping the world apart, at the very moment when our knowledge, both of science and of management principles, places in our hands the means of utilizing the resources of the world to improve living standards, on ever-higher levels, for all people. END

MYRON H. CLARK, past President and Honorary Life Member of the SOCIETY FOR ADVANCEMENT OF MANAGEMENT, died on August 30 at the age of 72 years in Concord, Massachusetts.

Mr. Clark had been General Factory Manager for the United States Rubber Company for many years. Until recently, he had been Director of the Productivity and Technical Assistance Division of the Mutual Security Agency in Washington. In 1946 he organized the Labor-Management Institute at the University of Connecticut and became the Institute's first Director.

Mr. Clark was also a member of the American Society of Mechanical Engineers, The American Academy of Political and Social Science, The American Arbitration Association, and the University Clubs of New York and Boston.

In the past he had been associated with the Johns-Manville Corporation, and, in 1927, organized the Boston management consultant firm which bears his name.

The Case for Variable Retirement Ages Versus Compulsory, Fixed Age Pension Plans

by B. Lewis Clarke, Jr.

This author recognizes a statistical fact that is rapidly becoming a factor in American management-employee relations. Along with America's population, the employee's average age is rising. He feels that in the near future, if not at present, this rise will cause a realignment of industry's retirement policies. Provision must be made for the competent older business performer. The writer weighs pros and cons of both the fixed and variable age systems, presenting a firm case for the variable age retirement plan, and outlines how companies can make such plans work.

UNTIL a short time ago, a brilliant executive worked for a large and nationally known company that makes special steels and tools of various kinds. He went with this company during the depression when jobs were hard to get. In order to make himself seem a more desirable applicant, he subtracted eight years from his age. This company has a mandatory retirement age of 70. When the executive was approaching 78, actual age, the company was reluctant to see him go, but rules must be carried out. No one in the company felt this man was being kept on the payroll too long. They didn't think he was holding some younger man back, that the efficiency of the company's operations were impaired by an oldster. They didn't think so because they didn't know his real age. So long as the company thought he was under seventy, he was a capable employee. An isolated example does not prove a point, but it illustrates a side of a very controversial subject. I want to present to you facts and opinions on this subject. My purpose is to convince you that a variable retirement age policy is desirable.

I find that a convincing majority of writers on the subject of pensions express themselves as being in favor of a variable rather than a fixed retirement age. Most of these people were spokesmen for individual companies. Most of these same people, who are so much in favor of variable retirement ages in theory, are using compulsory retirement ages when it comes down to actual practice. This creates the odd condition of a majority of the companies throwing up their hands when confronted with the problem of working out a feasible plan for variable retirement. This is one of those situations where people who have been clever in solving problems in physical science, have tended to admit defeat in solving a problem in human relations. Great strides have been taken in the last few years in such things as job evaluation, merit rating, employee counseling, attitude surveys. I believe a solution of the problem of variable retirement ages is somewhere around the corner and that it will be a definite part of the management picture one day.

There are three views to be taken of this complex subject. The first is to view it with the eyes of the employee who is, we'll say, approaching middle age. The second is to consider it from the point of view of management in its desire to maintain the best employee relations and yet being desirous to maintain an efficient and flexible organization. The third area of consideration is national economy and well-being.

Increased Life Expectancy Affects The Young

Many articles give statistics showing the increase in percentage of older people in our country over the past 50 years. These articles usually project the figures for the next 50 years and show that we will have a high percentage of people over age 65 by the time we get to the year 2000.

The impression is sometimes given that the expected increase in percentage of persons past 65 is due to medical science's having increased the life expectancy of people of advanced age. This is not the case. It is due almost entirely to the fact that the death rate in infancy and during childhood has been reduced so greatly in the past 30 or 40 years. The great strides that the medical profession has made in increasing the life span, have had their main effect with the very young.

If medical science turns its attention

to the diseases of senescence and is successful in the development of techniques for combatting the degenerative forces of old age, they may be able to alter this picture and actually increase the expected life span of our pensioners. But if they do this, they will also add to the productive life span of the man as a worker and still leave about the same percentage of idle old people to be supported by the worker, provided we extend our national average retirement age upwards. When we think that the average person of 65 is now considered to be as biologically efficient as the average person of 55 was at the turn of the century, we can see a real reason for extending retirement age upward. The national pattern of pension thinking was set in the 30s. This was at a time when the desirable thing to do on a national basis was to get workers on pension and open up job opportunities for our millions of unemployed. I feel sure, were we starting now to plan for a proper pension age for today, we would have picked a later age than 65. Of course, the government's establishment of 65 as the starting date for social security has a tremendous weight in determining national retirement age.

Fixed Retirement Risks Over-Security

Certainly, one of the important cases to be made for our retiring at a fixed age is that the employee knows well in advance just when he is to stop work. He can plan his life with that as one of the important milestones. If this policy of fixed retirement at a certain age is absolutely adhered to, there are bound to be cases where the employee, realizing that all he has to do when he reaches some such age as 60, is to put in his appearance every morning and not make off with any of the company's or customers' assets, and he will be kept on for another five years whether he does much work or not. Thus this condition can be undesirable from the company's point of view.

It seems to me that it was a mistake ever to pick a fixed retirement age as a part of our national philosophy. At every major cross-road of our lives we have some freedom of choice and our case is considered apart from our neighbors, except for this extremely important one. The one function of the government that must of necessity be mandatory is the drafting of men in time of war. But consider how this is done. The young men are not told that they will all enter the armed services on such and such a birthday; they are told that they should report to their draft board. These boards consider the case of each boy on its own merits. Shouldn't the culmination of a way of life that has been going on for as much as 45 or 50 years receive at least as much individual attention and consideration?

Efficiency Should Be Criterion for Retirement

Considered exclusively from a physiological point of view our maximum efficiency is attained at about 20 years of age, our mental ability tends to rise rather sharply up to about age 40 and then continues in a slower rise to about age 60, then begins a slow decline. Psychological studies show that the mental standard at 80 is often equal to that at age 35. There is of course some loss of originality, but this is compensated for by thoroughness and steadiness.

The idea of having a variable retirement age, if we cut across all types of employment, is certainly nothing new. We have a much younger retirement age for professional football and baseball players than we do for the average person in banking or industry. In the same way, we have an earlier retitrement age for commercial airline pilots. They tend to retire when they are no longer efficient in the type of work they're doing. Why not carry this thinking into the broad national business scheme? Had the world insisted that a person stop productive work at age 65, we would have lost much of the best work of Titian, Michaelangelo, Leonardo da Vinci. Certainly there have been tremendous abilities past age 65 in such people as John D. Rockefeller, Bernard Baruch, Henry Ford, Douglas MacArthur, and Herbert Hoover. The thought of losing the abilities of these people at 65 is preposterous.

Many companies make the point of preferring compulsory retirement age because any other plan would both break down the established arrangements for orderly retirement, and be difficult to administer. I will admit that the handling of a compulsory retirement age is easier than the handling of a variable retirement age. Yet many of the forward steps industry has taken were more difficult than doing things the old way. This has never been a deterrent to the tremendous amount of change all through our national history.

I don't think it possible for any one person to present what is uppermost in the mind of a potential retiree. There is a vast difference in the way people approaching retirement look forward to the future. I have talked with a large number of our pensioners, both before and after the transition. To some people it might be a time of rejoicing—at last they're getting the rest and the leisure that they feel they have earned. A second group is not quite so happy—it is a matter of accepting the inevitable. They'll make out somehow, but they will miss their old friends and accustomed habits. To a third group, the retiring from work is the retiring from a way of life that they have known almost all of their lives and is going to be, they know, a serious and profound change. To a fourth group, being put on pension is retirement almost from life itself. They feel that it is the end of everything that had much meaning to them. I would say, unhappily, that the people who look forward to retirement with rejoicing are greatly in the minority. A period of counseling preceding retirement could facilitate their adjustment. tunities for the younger men.

The perpetual vigor and drive of our American corporations is one of our greatest national assets. Some writers on the subject think that automatic retirement at age 65 gives the effect of pruning the corporation of dead wood that might tend to slow its growth. This idea might seem good when first considered, but if we prune out much vital and valuable talent with the dead wood, are we not impeding growth just as surely as if we did no pruning at all? The ideal is to prune where pruning is necessary and not just because our statistical records say that an individual is no longer any good when we know that he is one of our valuable assets.

Business Reasons for Fixed Retirement

Another reason given for fixed retirement age is a tendency to remove the older men from the company to provide promotional opportunities for the younger members of the staff. Variable retirement ages can be worked out to aid the younger man rather than to block him. I have seen and heard of instances in several companies where younger men were blocked by superiors who were waiting out their time until retirement, when the company's purpose would be better served by retiring these men earlier and providing promotional opportunities for the younger men.

If we use a compulsory retirement plan, we should be very careful to insist on a satisfactory proof of age. Com-

panies which have not always done this have discovered many cases where they were unfair in letting certain employees stay on well past the mandatory age. In Massachusetts it is illegal to discriminate against a person between the ages of 45 and 65 because of age when considering for employment. I am sure this sort of thinking will never lead to a Fair Employment Practice Act that would prohibit asking an applicant's age; but it would promote variable age retirement.

A very real argument in favor of a fixed retirement age is that it is face-saving for the employee who is retired while another in his department is kept on. This does present a problem but almost anything we attempt in the field of human relations is a problem. Is this any reason why we should stick our collective heads in the sand and take the easy way out? All through an employee's work life there are decisions concerning him being made; some get promoted and some do not, some get substantial salary increases and some get little recognition in this regard. All of these decisions concerning an employee should be talked over with him, if this is done then the counseling in his late years of employment is a continuation of an understanding that has been a part of his work life.

The one single subject that engages present day writers on pensions more than any other is that a good job of pre-retirement counseling should be done and should start at a fairly early date, no later than five years before retirement. I agree with this completely, but then I am of the opinion that periodic counseling should be a part of sound company personnel policy no matter what the age of the employee. I said a minute ago that there was a lot being written on the subject of pre-retirement counseling. I feel that far more is being written on the subject than is practiced. If more counseling was being done we would not see a dictatorial device such as fixed age retirement substituted for a properly administered flexible policy that would stem from a broader background of sound staff relations.

Executive Group to Qualify Aging Employees

The first step in the planning would be the organization of a group of top department heads (if it were a large company), or the president and two or three of his top assistants (if it were a small company), as a personnel review board. This group would have as its responsibility the planning of the progress of the higher-placed employees and of the older employees. They would meet at least twice a year. We will not go into their function relative to any but the older employees. Every employee on reaching some age such as 52 would come to the attention of his committee. It would be their responsibility to inform themselves as to work performance of these older employees. No decision would be made about any employee until after his case had been discussed by the committee at several of their semi-annual meetings. It would be the policy of the company for this committee to recommend the early retirement of employees as well as their retention past a normal retirement age.

Variable Norm Should Be Established

There should be a normal age on which the pension would be computed and retirement would vary around this norm. A substitute to early retirement would be a transfer to less demanding duties. It would be highly desirable for the older employee to have a semi-annual physical examination to indicate whether or not his health would have a bearing on his length of service. The total man in relation to his work situation is a complex entity. No group of psychologists can tell a company as much about this entity as the company can learn from day to day observation. With care and patience this personnel review group should weigh these older people in relation to their job. Possibly the job has changed materially and the man cannot change with it, or possible at age 65 he is doing such unusually good work it would be uneconomical and inefficient to lose his valuable experience and knowledge. No two cases would be alike and shouldn't be solved by a rigid policy. It should be company policy to maintain a counseling liaison with all employees, the counseling at older ages would be merely a continuation. If it were thought an employee should be pensioned earlier than normal or transferred to simpler work this idea should be advanced carefully and discussed over a period of time. The employee should be given the choice of an earlier pension or of transfer. In presenting the idea of retirement it would further be desirable to set a time limit instead of a fixed time, again giving him a choice. You might, for example, come out of a counseling session with the mutual understanding that the employee was to retire between his 59th and his 61st birthday. If a transfer to a less demanding job is made, a downward adjustment in salary would probably be in order but this would depend on the individual case. If an earlier-than-normal retirement were effected it should not be at the actuarial equivalent of the pension at the normal retirement date. The Company would be saving by getting rid of an inefficient employee and benefiting by tightening up their organization. They should be able to afford to pay the amount of social security until age 65 and also pay a supplemental pension to offset the actuarial reduction from a full pension. If those pensioners who go out earlier are off-set against those who stay past normal retirement age the fund would not suffer.

Those people who stayed past age 65 would be parties to frequent counseling sessions. It would be understood that each year the probability of continuing much longer would lessen. Several companies that I know of make a practice of retiring everyone at age 65 but of re-employing some of its pensioners immediately upon retirement at their old salary less the amount of the pension. This seems a logical solution of the financial end of the transaction and provides the variable age feature in a different form.

Basic Reasons For Planning Variable Retirement

There are a number of ways in which the details of variable retirement can be worked out. It has not been my aim to present packaged plans, but to try to present to the business world the basic ideas and thinking which can lead to working out a plan. There are compelling reasons for doing so. These reasons are: (1) if some increase in pension is allowed for working past 65, it would help to give a pension that would provide a sum more nearly adequate for maintaining a proper standard of living than is provided by most plans now; (2) the support of the elderly has to come from national production in the final analysis. Why not let them support themselves? Everyone concerned should feel that a just and dignified solution is being made and not the working of an arbitrary fiat; (3) your own interest should prompt you to get rid of the inefficient and retain the valuable and efficient employee; (4) the capable worker of 65, whose work is the major driving force of his life, should have the right to continue so long as he is entirely satisfactory. **END**

Are the Assumptions of Modern Management's Personnel Policies Consistent with Fact?

by Aaron J. Spector

Management men like to believe that behind their personnel policies lie fundamental psychological facts which give basis to practical procedures. This author shrewdly points out that in past times whole earth populations have lived by assumptions, workable enough, based on no actual facts at all. He then moves to the management personnel policy field of today, gives examples from Army surveys as well as business and industry group tests, to show that some of the most cherished modern ideas about personnel policies are based on utterly untenable assumptions.

If management formulated policies only on principles already established as valid by scientific methods there would be very few policies formulated indeed. This is particularly true in the realm of personnel policies, which would be dependent upon a paucity of principles established by social scientists.

Obviously we cannot, and do not, wait until the laws of behavior of human beings are spelled out before we attempt to deal with these human beings. In lieu of laws we make certain assumptions about behavior. Assumptions which are based upon our own observations or are within the framework of a theory which we call common sense knowledge. Throughout the ages man has operated on common sense knowledge, or to be more precise, on different common sense knowledges. For this is one system of theories which differs from place to place and from time to time. What is common sense knowledge in one era is superstition or ignorance in another.

For example, less than five centuries ago the population believed the world was flat, the Great Sea surrounded the universe, ships going too far from land would fall off the edge into space. It seems incongruous to us that people formulated policies and limited their behavior to conform with these assumptions. However, it was absolutely necessary for them to make some assumptions in order to maintain commerce.

Modern industry is also forced to rely on assumptions which are plausible within the limits of our present knowledge. Expensive policies and practices are based on these assumptions, some of which now appear to be untenable.

One would be hard pressed to find a person who does not believe that high morale leads to high productivity. On the assumption that the two are related, management introduces programs designed to improve morale — baseball teams, bowling teams, picnics, plant newspapers. At this time, the kindest thing one can say about these programs is that there is no conclusive evidence of their improving morale or increasing productivity. In fact, there is some evidence to the contrary, that many of these programs do not significantly affect either morale or productivity.

Let us examine another, equally widely accepted assumptions, namely one which maintains that good opportunities for promotion will lead to greater satisfaction of the employees. That "Promotion opportunities are the seeds of the hope of youth" is a highly-endorsed belief in our culture. It is implicit in the listings of jobs in the classified sections of newspapers, expressed in terms of "Good opportunities for advancement." It is common sense knowledge that a man would be happier with a system which offers him a fairly rapid rate of promotion than with one which offers a fairly slow rate of promotion. But the evidence available at this date runs contrary to this assumption.

Army Studied Reaction to Promotion System

During the past war, the Army conducted a study of soldier's reactions to the promotion system in different branches of the Army. They found an inverse relationship between satisfaction with the promotion system and the opportunities for promotion within the different branches. The Air Force, with the highest rate of promotion, was the most critical of the opportunities for promo-

tion, while the Ground Forces, with the poorest chances for promotion, were the most satisfied with the system. The promotion opportunities in the Service Forces were better than in the Ground Forces but worse than in the AAF; their opinions about their chances for promotion were also intermediate between the other Forces. The greater the opportunities for promotion the more critical were the men of the chances for promotion.

In a carefully-controlled laboratory experiment this author obtained strikingly similar results. Men who believed they had slim chances of being promoted were more satisfied with the promotion system than were men who thought their chances were good. This was true whether or not the promotion occurred.

Morale Effected by Promotion Chances

Even more interesting is the fact that morale in general was similarly affected by the varying opportunities for promotion. Low probability of promotion was positively correlated with an index of general morale. It appeared to reduce interpersonal tensions within the group as reflected in greater satisfaction with the other members, and in feelings of being liked by others.

Men who felt quite confident of obtaining a promotion, but who did not succeed in getting one, consistently showed the lowest morale. Furthermore, the amount of their communications was lowered and they complained of the inadequacy of the evaluations for promotions. This same complaint incidentally, is heard rather generally in industry. Those who are not promoted cry "favoritism" or "stupidity."

How can we explain these results which are in contradiction to common sense expectations? The Army researchers advanced the relative deprivation hypothesis in solution of their dilemma. They contended that, since promotions were so common in the Air Force, a man's promotion was relatively inauspicious and unrewarding. If he were not promoted he was one of the few so treated and he expressed his personal frustrations in criticisms of the promotion system.

An alternative explanation rests on the "autistic expectations hypothesis," which focuses on the time period in which an event is expected to occur. It asserts that expectations of events which do not have definite, specified time limitations result in personal autistic expectations of when they should occur. Moreover, if it is known that the event should occur soon, the time limit becomes so shortened in the autistic expectations that frustration must inevitably result. Conversely, if it is known that the event will be a long while in coming, autistic expectations project the event so far in the future that whenever it does actually occur it is sooner than expected. Therefore, people who expect to be promoted fairly rapidly may be dissatisfied with their fate, as compared to others with similar fates but who have pessimistic attitudes about their chances of promotion.

What implications or recommendations for personnel policies can we derive from these paradoxical results? One obvious recommendation is that management should err on the conservative side, rather than on the liberal side, in developing expectations about prospects for promotions. Regardless of what the actual rate of promotion may be, the most satisfied men will be those who had low expectations of being promoted.

The problem becomes more complicated when we take into consideration the fact that most people want the opportunity to be promoted. Will these people apply for work with a company which admittedly has a policy of promoting very slowly? At the present time we have no scientific evidence on this point. It would probably require a carefully controlled experiment to provide a valid answer. On the other hand we do have evidence which leads us to believe that once these people have taken jobs under these conditions their morale will be higher than if they were led to expect rapid promotions.

Policy making is never a simple task, but the risks involved are compounded when necessary facts are unavailable. In the absence of these facts it's customary to invoke an assumption about them. This entails additional dangers since the assumptions are frequently unrecognized and consequently no precautions are made to check on them. All too often, the assumptions are derived from common sense knowledge which, if examined carefully, would probably also lead to an antithetical assumption. Our proverbs offer numerous illustrations of this: "Haste makes waste", "He who hesitates is lost."

In the interest of improving policies it is imperative that management search for their implicit assumptions and test them when feasible. Unless these steps are taken management is likely to have policies based on the notion of a flat universe. **END**

AM Advertising Review . . .

In the July 1953 issue of the National City Bank Monthly Bulletin, the total sales or revenues of America's 100 largest companies is reported. It includes 77 manufacturers, 15 engaged in retail trade; 6 railroads, 2 public utilities.

In 1952, these 100 concerns did a gross business of $102,003,000,000. Heading the list was General Motors, with $7,645,000,000; Standard Oil of New Jersey was next wth $4,152,000,000; then American Telephone and Telegraph with $4,040,000,000. At the bottom of the list, but sizeable, was Standard Brands with $383,000,000.

Net income for the 100 concerns was $5,661,000,000. Of this amount, $3,211,000,000 was paid to several million stockholders. The balance, $2,450,000,000, was re-invested in the several businesses reporting.

The gross national product of the United States is approaching $400,000,000,000; therefore, the 100 concerns now account for about 25% of our total national product.

In the National City Bulletin, sales and advertising cost are not isolated. Based on average sales and advertising costs, these 100 concerns will spend close to $2 billion dollars for all forms of advertising during 1953.

Management is now being explored by many business papers. Advanced Management is no exception. In the New York headquarters of the Society for the Advancement of Management, the prospective advertiser now finds a library consisting of some of the most recent books on Marketing and Distribution. He will also find a complete set of Fortune Magazine, from the date of its first issue, February, 1930. In this file alone is a wealth of information about each of the 100 concerns reported in the National City Bank Bulletin of June 1953, plus an index that enables the researcher to find almost instantly the report or statistics he is seeking on thousands of other concerns.

The officers of the Society extend to members and others a cordial invitation to avail themselves of the new distribution library being assembled.

FRANK E. FEHLMAN,
Associate Research Director

Evaluating Human Relations Training For Supervisors

by Wesley Osterberg and Theodore Lindbom

Good experimental design is often very difficult to carry out. The authors realize the need of "building in" an evaluation design before a training program is started.

ONE OF the training programs that industry has most interest in is "human relations" training for supervisors. And one of the things we know least about measuring is what happens after this training. A recent study of the subject says:

> "Although supervisory training . . . is probably the most frequent type of training, . . . very little research evidence is available to answer the many questions which arise. The most critical question to be answered concerns the validity of usefulness of such training.
>
> "Validity is simply assumed or taken for granted by most persons who write on the subject of supervisory training as evidenced by the fact that, frequently, no mention of evaluation of results is made. Where evaluation is discussed, it is usually based on the subjective judgment of the persons who conducted the training, or on opinions as to the value of the training as expressed by top management. In only a relatively few cases in the literature is objective evaluation data provided."[1]

There is a big problem in getting measures of what happens on the job as a result of training in human relations. The usual criteria are production, efficiency, or morale, and in each case there are many things that can drive them up or down. There are economic conditions, seasonal cycles, ability level of employees involved, transfers in and out of a department, actions in other parts of the plant, changes among higher executives, and so forth.

In the last analysis we will have to rest the case for training on one of these criteria, despite the factors that confound our data. An indirect measure that can be made, however, is one where we get at the subtle and subjective changes in the supervisor that will be manifested later in their effect on one or more criterion measures. If the supervisor has benefited from the training, we should be able to point to it in him even though we can't point to any immediate changes in the people under him.

Measuring the Effects of Training

There are a number of ways we could go about finding the changes, if any, that training has effected on the supervisor. A test of his understanding of supervisory principles is one way—and a popular one. A questionnaire to reflect attitude toward people generally is another way. A psychological test of the projective variety could be used. The supervisor's boss could be requested to rate him on human relations skill before and after the training.

Certain aspects of his behavior could be recorded in order to make before and after comparisons. For example, they might be the number of days he takes off from work, the number of conferences he calls or his participation in them, the number of new ideas he comes up with, and so forth. The behavior measures decided upon should, of course, be chosen to correspond as closely as possible with the content of the training program.

A direct and simple way of finding out if the supervisor has changed as a result of the training is to ask him. Of course, the way questions are put to him, and the person putting them, will obviously influence the answers he gives. Furthermore, he may not be able to report changes due to the training if they exist, because he can't recognize them. Or if he recognizes changes, it may be difficult to describe what they are.

There are certain weaknesses inherent in this approach to evaluating supervisory training. The main one is probably the tendency of persons to "say good things" about any sincere training effort even though they have

[1] Lindbom, Theodore, *Supervisory Training and Employee Attitudes*, page 15. Unpublished Ph.D. thesis on file at the University of Minnesota library.

to stretch a point to do so. Recognizing this weakness but certain that *some* evaluation is better than no evaluation at all, the study reported below is an exploratory example of the "ask him" approach to evaluating supervisory training.

The group studied was made up of oil company supervisors who had five half-days of human relations training.[2] The training sessions were held during the summer of 1949, and the evaluative questions were sent out in the Spring of 1952. Each supervisor was asked to state his frank opinion.

Of the 90 men who had participated in the training group, 64 were still with the oil company in 1952 and available for questioning. They were predominantly pipe-line foremen who supervised field crews of 12-15 men. The group also included field office supervisors, pump station supervisors, superintendents, and a few other persons in supervisory jobs. Of this group of 64 to whom questionnaires were mailed, 31 replied.

No attempt was made to get more returns by sending additional reminders or requests. Because it was probably the interested supervisors who replied, the results reported below are likely to be more favorable than what would have been found with a 100% return.

Following are the questions that were asked:

—Of all participants

1. What part of the human relations discussion program did you think was most helpful, what part was least helpful, and why?

2. Is there anything that you are now doing differently—as a foreman or supervisor—because of your experience in these discussions? Yes..... No..... If so, what are you doing differently?

3. Is there anything about your men now that is different from the way they were before; anything that has resulted from changes in your operations due to the discussion? Yes..... No..... If so, please describe.

— Of superintendents and others, but not foremen

1. Have there been any changes in other people who were at the conferences as a result of the human relations discussions? Yes..... No.....

Results

The first question was inserted for orientation and "ice-breaking" purposes. Although the responses to it do not give us the information needed to evaluate the training in terms of behavior change, it is interesting to note what they were. There were three parts to the program: a lecture, case discussions, and role-playing. Of the 31 men responding, six did not make a clear-cut choice, one named case discussions, and 24 named role-playing as most helpful. Typical of the comments was this one from a foreman:

> "The case histories which we acted out, recorded, played back, and discussed were most helpful to me. The (case discussions) seemed of little help except something to argue about. Having the two types of discussions convinced me that none of us were as honest in looking at the facts and leaving personal feeling out as we should be."

Question #2 is the first one that brings up the matter of behavior change, which is what we are really interested in. Two of the replies were that a job transfer immediately after the training made it impossible to say. One man replied that he didn't know of anything he did differently. The remaining 28 (90%) replied that they were doing things differently.

Answers Indicate Change of Behaviour

From a foreman

> "The main difference is trying to understand the men under me and their problems. Also talking to them as a group about their work and it is paying off."

From a superintendent

> "I try to listen to the subordinate—even though it is a task. Prior to (the training) I was inclined to 'tell' him and not waste time listening to unrelated discussion. Our supervisory meetings are patterned now on the 'drawing out' rather than the 'telling.' I repeat—those play acting series really stuck with me."

From an office supervisor

> "I have made an active effort to determine what was wrong in cases where it appeared that something was troubling an employee. I believe that by being a good listener in at least two cases and by using the techniques learned at (the training conferences) I was successful in finding the root of the trouble."

In question #3 it is the change that we are most interested in, of course. By asking the supervisors to report on such changes, we are introducing an error factor, but the replies have at least some bearing on the question of training evaluation.

Of the 31 respondents, 20 or 65% reported "yes", there were changes in the employees due to the training they as supervisors had received. Four reported "no" or "not to my knowledge." Seven of the respondents either did not answer the question at all or answered ambiguously. From the 20 attempts to describe changes in employees, the following are examples:

> "I believe our operations have been made more efficient by having the employee agree on specific objectives, or actually set their own goals." (Foreman).
>
> "It seems they don't mind coming to me about grievances and discussing them, also discussing the jobs at hand. They seem more inclined to make suggestions." (Foreman).
>
> "I believe that we have the best 'Human Relations' in our Division that we have ever had. These changes have been taking place in the last year and a half, and I have heard from several employees themselves that they can see quite a difference over two years ago. I don't attribute all this change to the conference—, but I am sure that it did add considerable to the changes that have taken place. (Unsigned, and job level indeterminable).

The last question was sent to superintendents, but not to foremen. It was also sent to a few others who attended who have opportunities to observe many of the people who had participated in the training conferences. The question asked if there had been any changes in others who had been at the conference.

This question was sent to 11 men who had been in the training group; seven of them replied. Four of the seven checked the "yes" category, none checked "no", and all seven answered the question at some length. The replies might be classified into two groups: three "doubtful" and four "positive". Typical comments from the first group were:

> "—I have sometimes believed that although these men are giving lip service to the principles developed at our (training) conference, that this understanding is only a surface understanding and that their performance does not nearly reach the depth of understanding that we would desire. However, I do not always feel this way, and on the whole I am inclined to think that the result of the conference has been improved supervisory behavior by supervisors of all levels—."
>
> "—I am unable at this time to select any specific individual who attended the (training) conference and say he has changed so greatly—insofar as his human relations are concerned—that it could be said that the conference was entirely responsible."

Two comments typical of the "positive" replies were:

> "—We have better understanding between the foremen and the men under their supervision, probably because of their

[2]Osterberg, Wesley, "Training Which Modified Foremens' Behavior," *Pers. Journal*, December, 1949.

improved technique in issuing instructions and their elaboration on why certain instructions must be issued and why certain jobs must be performed in a prescribed manner. We have been able to improve our safety record (587 days to date without a lost time accident) and this has been accomplished by following suggestions of foremen and their men in formulating and successfully carrying out a cooperative safety program."

"—Certainly, since the (training) conferences, we have further promoted effective two-way communication with our supervisors and employees. Our supervisors seem to say what is on their minds quite freely. Instinctively, our management group appear to think in terms of obtaining at least their supervisors' reactions to actions which are under consideration. Furthermore, this has appeared to result in more delegation of authority."

Eleven of the respondents made comments supplementary to their answers on the questionnaire. They (five) commented most frequently to the effect that "follow-up" or "refresher" conferences should have been held. Four of them discussed current human relations problems of their own, and three suggested ways in which the training program could have been improved (apart from follow-up).

Discussion

In reporting this study, we are not offering it as an example of how training should be evaluated. Actually, it points to the need of "building in" an evaluation design before a training program is started. Asking them to describe specific examples of changes in their own behavior and in that of their employees seems to have resulted in more meaningful evaluation than general comments might have given. Certainly, some form of direct measurement of employee behavior before and after training of the supervisors would have given more meaningful results. Certainly, too, a "control" group of supervisors who did not receive training would have made more accurate evaluation possible.

If we are realistic about this subject, however, we must admit that the industrial situation simply does not lend itself well to controlled experiments. The authors are not suggesting that good experimental design is either undesirable or impossible in the industrial context; but it should be recognized that it is often very difficult to carry out. If a well controlled experiment where high objective measurements can be made is not possible, some form of evaluation is more desirable than no evaluation at all.

Authors In This Issue . . .

MEYER M. SEMEL, whose discussion of arbitration in the management-union future appears on page 5, is a lawyer and industrial relations counsellor in Irvington, New Jersey. He is an active member of the Northern New Jersey Chapter of SAM. In preparing his article, Mr. Semel has drawn upon many years of experience in the promotion of better relations between management and labor. He is the author of *Industrial Relations Surveys*, and has been elected this year to the board of trustees of the Production Engineers' Society of New Jersey.

HARRY LEE WADDELL, who has been Editor of *Factory Management and Maintenance* since 1950, began his editorial career with the *Buffalo Evening News*. In 1946 he became Assistant Managing Editor of *Business Week* and has been guest lecturer on Industrial News and Editorial Presentation at the American Press Institute, Columbia University, since that time. His penetrating article on the factory of the future (page 11), measures the social and mechanical stimuli favoring realization of the automatic factory against the practical problems which must be overcome before that goal can be attained.

HAROLD F. SMIDDY, a past vice-President of Management Research and Development of the SOCIETY FOR ADVANCEMENT OF MANAGEMENT, makes an important contribution to management literature in his analysis of the various areas of interchange of management know-how between business and government on page 16. Mr. Smiddy is vice-President of the General Electric Company. Before joining General Electric in 1943, he was a partner in the industrial management consultant firm of Booz, Allen, and Hamilton. He is presently serving as vice-President and Director of the Council for International Progress in Management (see CIPM News, page 31), and is a member of the American Society of Mechanical Engineers.

B. LEWIS CLARKE, JR., whose critical evaluation of the respective merits of fixed vs. variable retirement ages appears on page 21, entered personnel work in 1943 when he left his practice as a consulting engineer in Philadelphia to join E. N. Hay and Associates. In January of 1953 he became Assistant vice-President of the Philadelphia Trust Company. He is a registered professional engineer in Pennsylvania and has written several articles for the Financial Public Relations Association.

AARON J. SPECTOR is author, lecturer, and consultant on Human Relations Problems, Motivation, Leadership, and Morale to various industrial and military personnel organizations. His previous articles include *Factors in Morale*, published in AMERICAN PSYCHOLOGIST, August 1943, and *Expectations, Fate, and Morale*, to be published in a forthcoming issue of PERSONNEL PSYCHOLOGY. His perceptive inquiry into today's personnel policies (page 24), is based on extensive study and research in the field of personnel psychology. Mr. Spector received his doctorate in Psychology at Boston University and is now Instructor of Psychology at the University of Massachusetts.

WESLEY OSTERBERG, co-author of *Evaluating Human Relations Training for Supervisors* (page 26), is Senior Research Analyst for The Prudential Insurance Company of America. After receiving his Ph. D. in Industrial Psychology at Western Reserve University, he became Assistant Professor of Psychology at the University of Illinois and later served as Industrial Psychologist at the Personnel Research Institute in Cleveland.

THEODORE LINDBOM, who worked with Mr. Osterberg in preparing the valuable report on Human Relations Training (page 26), is Training Director for the Midland Cooperative Wholesale in Minneapolis, Minnesota. He was formerly a research analyst, and received his Ph. D. at the University of Minnesota.

The Management Bookshelf . . .

Gotton Gin's Inventor Also Planted Some Seeds of Modern Industry

by HAROLD E. KUBLEY

Every American learns that Eli Whitney invented the cotton gin. Few know that he also introduced interchangeable manufacturing, thereby laying the groundwork for mass production in this country.

The book makes clear Whitney's contributions to the beginnings of the modern industrial system, as well as his impact on his own generation. The authors give a detailed account of the difficulties he encountered in putting his ideas into practice, difficulties paralleled by such other innovators in industry such as F. W. Taylor.

The World of Eli Whitney also tells the story of the inventor's troubles with Georgia planters infringing on his cotton gin, an account of his trials when tooling up his gun factory, a description of his feud with a petty government official who sought to force him out of business. The volume includes a fine personal characterization of the man and of the society in which he moved. The author wisely does not become involved in the controversy about who introduced interchangeable manufacture: Simeon North with his pistols or Eli Whitney with his muskets. All in all, a book worth reading.

THE WORLD OF ELI WHITNEY: *by Jeannette Mirsky and Allan Nevins. 346 pages. The Macmillan Company, 1952. $5.75.*

Knowledge of Distribution Costs Would Help Lower Total Debt, Authors Claim

by FRANK E. FEHLMAN

In the June issue of "Money Matters", a bulletin published by the Institute of Life Insurance, we read that our total debt, government, business and individuals, has passed $640 billions. The per capita debt is now $4,000.

Would a better understanding of Distribution Costs eventually aid in the reduction of our colossal total debt that now amounts to $4,000 for every man, woman and child in this country? The answer to this question must be an emphatic Yes if the findings of Heckert and Miner are accepted.

In Part I of Distribution Costs, the subject of distribution costs is analyzed by the authors. In Part II, methods and procedures for controlling such costs are covered in detail.

As students, instructors, sales and advertising managers, and top officials explore the statistics, charts, and other data in this book, it becomes evident that "the cost of distribution is subjected to far less rigid tests than is the cost of production operations."

This is a recommended book for all levels of management, especially those who have to do with the actual work of moving goods, advertising managers, and sales managers.

DISTRIBUTION COSTS (2nd Edition). *By J. Brooks Heckert and Robert B. Miner. Ronald Press.*

The Elusive Art of Getting, Giving Information is Dealt With in Management Book

Before an executive can fulfill the three classic functions of planning, organizing, and control, he must first have a working grasp of the fundamentals of communication. *Communication in Management*, by Charles E. Redfield, offers a new, comprehensive guide to this phase of management operations.

The author makes a comparative analysis of the techniques, past and present, of getting information (reports, interviews, polling, grievance and suggestion procedures) as well as giving information (order-giving, circulars, manuals, and handbooks).

The purpose of the book is to give direction to communication thinking, rather than merely to expound a particular group of communicative devices. Executives will find it a useful frame of reference in which to evaluate their present communication procedures.

Mr. Redfield has arranged his book into five sections. Part I defines and orients the subject, describes different types of information to be communicated, and establishes certain guiding principles for more effective communication.

Part II deals with communicating downward and outward, from superior to subordinate personnel, from central headquarters to branches and field offices. A most important downward activity treated here is that of order-giving.

Part III deals with upward and inward communication, taking up the problem of finding out what is going on in one's organization, recommending methods for surmounting the psychological and social barriers involved in administrative reporting, as well as other upward-flowing processes.

In Part IV the emphasis is upon horizontal communication—the interchange of information and ideas on the executive level—with particular attention to clearing, reviewing, and to the conference process.

The last section of Mr. Redfield's book is devoted to the fundamental theory of administrative communication, its necessary corelationship with organizational structure. "In the future," Mr. Redfield writes, "communication will assume added importance as a key factor in determining the role of staff units, in choosing between centralization and decentralization, and in charting the vertical and horizontal elements of organizations."

COMMUNICATION IN MANAGEMENT, *by Charles E. Redfield. University of Chicago Press. 290 pages. $3.75.*

Small Firms Labor Relations Subject of Valuable New Black-Piccoli Book

by HIRAM S. HALL

Successful Labor Relations for Small Business, by Black and Piccoli, is not a book for casual reading. This is a working manual to be referred to time and time again. The industrial relations

wisdom contained in its pages is distilled from experience, and plenty of it.

Two competent labor relations men, James M. Black and George Piccoli, of Cleveland's Associated Industries, pooled their experiences in negotiating some two hundred labor contracts each year, and have come up with a long-needed tool for harassed executives, particularly those in smaller companies.

There is no substitute for experience. The advice given here is practical, usable, and far superior to that of a lot of so-called labor relations experts and labor attorneys, whose limited experience only serves to confuse the unwary businessman and to cause him to make errors of judgment which are disastrous.

This book is written around the simple theme that the small business man who has character and who combines reason with firmness will do alright, in dealing with his employees. If he sets his personnel policies and wages in line with those of his neighbors, knows his employees on a face to face basis, and has established his integrity with them so that they believe him, he should have a minimum of labor trouble.

Usually the small businessman is like the juggler in a circus—he is preoccupied with getting orders, following his product through the shop, stopping at the bank to renew a loan, keeping up with what his competitors are doing—running a hundred and one details of his business without too much attention to what is going on around him, at least as far as his employees are concerned. Before he knows it he is in hot water—his neighbors have raised wages, given longer vacations or more holidays—and he is ripe for the union.

When he realizes his predicament, it is frequently too late. He is bewildered, does not know where to turn and since trouble is said to come in threes, usually gets wrong advice. That is the reason behind this book!

As a businessman, the owner-manager of a small business has a high regard for facts. Black and Piccoli tell him what facts are needed, where to get them, and what is more, how to use them after he has them.

I cannot emphasize enough that recognizing a fact is one of the most difficult things to do in industrial relations. To separate the solid truth from the miasma of propaganda, emotional reasoning and half-truths, takes judgment and experience. The authors have gone a long way in cutting away the underbrush so that facts are recognizable and usable.

However, the facts gleaned from an analysis of the industrial relations profiles referred to in this book and the recommended procedures based upon these facts, are all obtained from the Cleveland area—a highly-industrialized section of our country. The small businessman in other parts of the country should not be deluded into following these recommendations specifically or blindly. Each area has its own wage levels, its own personnel practices, its own characteristics. Follow the methods recommended—but get your own facts and based upon these facts, make your decision.

The chapters on union organization are particularly well done. They show a first-hand knowledge of union psychology. They set forth the hopes, aspirations, and political needs of union leaders which colors their thinking and guides them in dealing with the locals and the rank and file. This chapter also describes the appeal which the union leaders make to the employees, based upon the unspoken needs and desires of which the preoccupied businessman is seldom aware.

The bewildered, uninformed owner-manager of a small business should take time to understand the nature of the trade-labor union. If he does, he will not be trapped by his own emotions into making strategic errors of judgment. This book is interlarded with sound observations which should lead the reader to a better understanding of the nature of the labor relations problem.

After sitting in on labor seminar after labor seminar, I have become aware of the dearth of information about how to act and how to handle a strike intelligently. This is understandable. The field of personnel administration and labor relations has expanded greatly and the practitioners of these arts were for the most part never exposed to strikes. Few indeed can remember the terrible violence of recognition strikes in the 1920s and 1930s.

Even if the labor-relations manager or the labor lawyer is experienced and has gone through the baptism of fire in strike after strike, he is dealing with businessmen, both owners and top management, who have never been through a strike and who are completely inexperienced and uninformed. Yet these are the men who must make the final decision. Is it any wonder that indecisiveness is the characteristic attitude of the businessman during a strike?

Often the top man turns down the idea of communicating with his employees during a strike. He is fearful of repercussions after the strike. How often does the businessman make concessions to end the strike after he has it practically won. Needless concessions will have their effect upon future labor relations, all because he could not sense that a back-to-work movement had already started and that a few more days or a week would see the end of the strike and gain for him respect for his firmness in handling the situation.

Fear of future repercussions, insecurity based upon lack of experience in dealing with a strange situation, all add up to prolonging a strike needlessly.

The chapters on strikes outline a positive course of action; well conceived, orderly, and designed to appeal to the employees' sense of fairness and good judgment.

These chapters alone are priceless. Nowhere else have I seen put down on paper the things veteran labor relations people have learned in the bitter school of experience about strikes.

This book is a guide, not a book of formulae.

Check your personnel policies in the light of its advice. But remember no formula can be used in labor relations—you are strictly on your own. The authors and the Associated Industries of Cleveland are to be congratulated.

SUCCESSFUL LABOR RELATIONS FOR SMALL BUSINESS. *By James Menzies Black and J. George Piccoli. 420 pages, McGraw Hill. 1953. Price $6.00.*

New Analysis Shows Unions Can Be a Working Asset To Management

Toward a Democratic Work Process, by Fred H. Blum, is based on a two-year study of the Geo. A. Hormel & Company of Austin, Minnesota.

The situation was unique in that the Hormel Company was a recognized leader in labor-management relations before the advent of strong national unions. A strong local had been established within the company, encouraged by it. When the local joined a national union, says the author, the Hormel management discovered that their policy of encouragement paid dividends. The management-labor problem that afflicts so many industries never came into existence.

TOWARD A DEMOCRATIC WORK PROCESS, *by Fred. H. Blum. 227 pages. Harper & Brothers. New York. $3.50.*

CIPM Reports . . .

COUNCIL FOR INTERNATIONAL PROGRESS IN MANAGEMENT, formerly the National Management Council, is a non-profit, non-political organization devoted to the promotion of the science of management on the international level. SAM is a co-founder and charter member of CIPM.

The United States program for developing the underdeveloped areas of the world is now a healthy infant of four years. This program was undertaken by the Government principally as an effective means of retaining or bringing the underdeveloped areas within the orbit of the free world. Thus it is a political weapon which seeks to outbid the ideological panaceas offered by the Soviet world to the poor and backward areas.

This political objective is realistic and fundamentally sound. In seeking to raise the standards of living in the underdeveloped areas through technical assistance, thereby achieving a better economic balance throughout the free world, the Government would strengthen its own economic and military potential as well as muster greater popular support of Western liberalism.

But the political objectives can be overemphasized. It is significant indeed that the Government seeks to execute the Point Four Program, for example, not by direct dollar aid, as was the case with the Truman Doctrine and the Marshall Plan, but by a program which would stimulate self-help in the underdeveloped areas with the cooperation of American private business. It is also significant that American business is beginning to respond enthusiastically to the incentives for profit and investment which are inherent in the program.

These incentives are occasioned by:

1. A growing awareness among American management that new markets in depth must be found abroad if production in this country is to continue to grow—or even remain at its present level.

2. An ever-increasing need for new sources of basic raw materials abroad, as formerly accessible sources now in the Soviet orbit are no longer available and old sources are being depleted.

3. A desire to improve the climate of investment opportunities abroad—a climate which is often adulterated with all the uncertainties and inefficiencies which go with social instability, mismanagement, political paternalism, and technological backwardness.

The opportunities for management in this field are a challenge perhaps not equalled since the time when there was an American geographical frontier to be exploited. But there are dangers and pitfalls in the development of areas on an international scale which were not present in such a degree under the earlier exploits. There are severe discrepancies between our social and political structure, our psychological orientation, our customs and traditions, and those of the underdeveloped areas. American management has already encountered such discrepancies even in the more advanced countries of Western Europe and South America.

The limitations on the rate at which an underdeveloped area can improve itself economically can be overdone only as fast as certain values, institutions, and customs in the area can be so altered as to be functional and consonant with technological economic advancement. Changes might have to be made in such basic matters as:

1. Social orientation (e.g. from a basically "family orientation" to a less autonomous and impersonal social orientation, especially in business relations).

2. Social taboos (e.g. female restrictions, usury, social mobility, caste sys-system).

3. Social inertia and reluctance to change from time-honored traditions.

Changes Must Be Made With Discretion

Most of these changes would be painful—and if not administered intelligently with benevolent discretion, they might defeat our objectives and surrender the areas to our antagonists. We must take into account the sensitivity of other peoples about external interference and the difficulty we would have in making clear to these people the mutuality of our interests and theirs, as well as being very much aware of the severe limits on our own understanding of the values, attitudes, customs, and institutions most conducive to economic de-

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velopment of the kind serving our mutual objectives.

In the report "Economic Strength for the Free Wold" made last Spring to the Director of Mutual Security, then Harold Stassen, by the Advisory Committee on Underdeveloped Areas, the following three rules of thumb were prescribed in making such changes in underdeveloped areas:

1. to move slowly in deciding whether and what changes must be brought about
2. to limit proposals for change to those recognized and supported by responsible and competent persons in the participating area

3. Not to emphasize American initiative in getting such changes considered and promoted, except where public recognition of American support for particular changes will itself serve overall U. S. objectives.

This is a *tall order* for American management interested in foreign enterprise. But a sober evaluation of any arrangement for international cooperation or investment at the private management level is absolutely essential to its business as well as political success. The international responsibilities of management grow in geometric progressions as new economic frontiers avail themselves by the business and political exigencies of the times.

The difficulties are not so great, perhaps, as one would think upon first glance. The knowledge and skills acquired by advancement in handling men and materials in America can also be applied, with variations, to breaking new business frontiers in foreign underdeveloped areas. The problem at first will be one of human relations and the setting of the optimum "business climate" which is congruous with the particular foreign society considered. But what serious-minded and perceptive manager today can be disheartened or timorous about this, when he has observed the tremendous changes toward progress which have occured in this country during the past twenty-five years in spite of the presence of such socially explosive problems as industrial relations, ethnic assimilation, and the productivity of the worker?

Scientific management was the prime mover of these domestic changes. It can and must enter the foreign sphere with as much intelligence and as little trepidation as it did when it made the U.S. the production colossus of the world.

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